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ESSAYS, MONOGRAPHS, AND CASES.

The Diastaltic System. By C. P. Frost, M.D.

A nervous system—the grand characteristic of the animal body—in its simplest form, is composed of (1) an afferent trunk, made up by the union of nerve fibres expanded over the surface of the body, or a portion of it; which terminates in (2) a ganglionic centre, composed of vesicular nervous matter; and (3) an efferent nerve trunk, which proceeds from the centre to be subdivided and distributed by a plexus of fibres to the muscular tissue of the body.

The first trunk is styled an afferent or excitor nerve, from its function of carrying an impression from the periphery *to* the centre, and thereby exciting a stimulus which is conveyed *from* the centre by the efferent or motor nerve, and causes a contraction of the muscle to which it is distributed. The *distinctness* of these two sets of fibres has only been *proved* in the highest department of the animal kingdom, yet it is believed to exist in all departments. The simplest form of nervous system is only found in the tunicated mollusca. As we ascend the scale, we find the system more compli-

cated—consisting of numerous ganglionic centres, which are connected with each other by commissural bands, by which influences may be transmitted from one part of the system to another. As the number of organs to be supplied with nervous influence is increased, so must the number of ganglia be increased. In the star-fish, we find as many ganglia as there are rays; i. e., the original form of nervous system is repeated as many times as the number of separate organs demands. The *complexity* of the function to be performed by a set of organs, may, in some cases, account for the multiplication of the ganglia. In all cases, the individual ganglia remain in a great measure separate from each other.

It is believed that every nerve fibre runs a *distinct* course from its origin to its termination. Each nervous trunk is made up of a large number of these fibres, and the different bundles of fibres composing a trunk may inosculate with the bundles of another trunk—yet the fibres themselves do not inosculate, but maintain a separate individuality. The office of each fibre is, therefore, probably distinct. An inosculation, or plexus, may have for its object the intermingling of the fibres of a nerve possessing one function with those of another possessing a different office, or to afford a better means of distribution for the nerves of corresponding endowments. It may also contribute toward favoring, measurably, a consentaneousness of action—as examination of the nervous system of the lower classes of animals would seem to indicate.

We find in all but the lowest invertebrata, ganglia superadded to those already mentioned, situated near the entrance to the digestive cavity, and which are connected with organs by the aid of which a knowledge of external objects is gained—these may be termed the "sensory ganglia."

An organ which is not itself the centre of sensory or motor nerves, but which derives its stimulus to action through the agency of the parts of the nervous system above mentioned, is found in all animals endowed with intelligence, and is called the cerebrum.

This essay is concerned, however, with that part of the system which exhibits those actions called, by Marshall Hall, *reflex* actions. To Dr. Hall we are indebted for the discovery and elucidation, in a great degree, of this system, called by him, originally, the True Spinal System, and more recently the *Diastaltic System*. He has substituted the term esodic for the name of the nerve first called afferent, and exodic for efferent; meaning by the former the nerve that furnishes the way of communication from the circumference to

the centre ; and by the latter, the nerve that makes a communication from the nervous centre to the periphery, i. e., the muscles.

We shall consider this system ; firstly, in respect to its Anatomy, and secondly, in respect to its Physiology. In the words of Dr. M. Hall, "its anatomy comprises a system of incident and reflex (esodic and exodic) nerves, connected with the spinal axis as a centre. Its physiology consists of functions all of which are performed through this peculiar anatomy. These functions comprise all the acts of ingestion, of retention, of expulsion, and of exclusion, in the animal economy ; they are those, therefore, on which depend (1) the preservation of the individual, and (2) the continuance of the species. All these are reflex spinal (diastaltic) functions."

1. *The Anatomy of the Diastaltic System.*

The cranio-spinal axis consists of the spinal cord, or *medulla spinalis*, and its prolongation upwards the *medulla oblongata*, and the sensory ganglia. The spinal cord is enclosed in the bony canal of the vertebral column, and extends from the foramen magnum to the first or second lumbar vertebra. Its branches are continued as the *cauda equina* to the extremity of the sacral canal. Its investing membranes from without inwards, are the *dura mater*—a continuation of the dura mater of the brain ; the arachnoid and the pia mater ; and a thin process of the latter sent off from each side of the cord for its whole length, and separating the anterior roots of the spinal nerves from the posterior, and called, from its serrations, the *membrana dentata*. The medulla spinalis presents on its anterior aspect at the middle line, the fissura longitudinalis anterior ; and on its posterior aspect the fissura longitudinalis posterior. The anterior fissure is wider than the posterior, which is so narrow between the second cervical and second lumbar nerves as to be hardly perceptible. The posterior fissure is, however, the deepest, as it penetrates to about one-half the thickness of the cord, while the anterior only extends to one-third of its thickness. The halves of the cord, made by these fissures, are united by a commissure of white and grey matter, in the centre of which is the "spinal canal," a continuation from the fourth ventricle. At a point corresponding to the line of attachment of the posterior roots of the spinal nerves, we see the posterior lateral sulcus—and at a point corresponding with the attachment of the anterior roots of the nerves, the anterior lateral sulcus. These furrows divide the lateral halves of the cord each into three columns : but, inasmuch as the anterior lateral sulcus is not well marked, and as there is no physiological distinction between the anterior and

median lateral columns, it is customary to regard them as constituting one column.

On making a transverse section of the cord, it is found to be composed of white and grey matter. The white matter appears as two hollow cylinders placed side by side and connected by a narrow, white commissure. Each cylinder is filled with grey substance, which is connected by a commissure of the same matter. The grey matter thus appears to constitute two somewhat crescent-shaped masses, with the convexities turned toward each other; while their cornua are turned toward the surface of the cord. They approach the surface at the point of departure of the spinal nerves—the anterior does not extend quite to the surface, but the posterior does, forming a narrow, grey line, which marks the sulcus lateralis posterior. The white substance of the spinal cord is composed of parallel longitudinal fibres, extending the whole length of the cord, and some of which are evidently continuous with those that constitute the nerves.

The cord is not of uniform dimensions throughout, but presents enlargements at the points of origin of the brachial and lumbar plexuses. In these enlargements, the quantity of both grey and white matter is increased; the inferior, however, has the greatest quantity of grey matter. In the articulata and vertebrata, we also find similar ganglionic enlargements, where the nerves are given off to the locomotory organs.

From the medulla spinalis are given off three pairs of nerves, which go to be distributed to nearly all the textures of the body. These nerves arise by two roots, one anterior and a posterior. The anterior roots proceed from the anterior lateral sulcus, and are smaller than the posterior. The posterior roots proceed from the posterior lateral sulcus. Their filaments of origin are more numerous than those of the anterior.

Considerable diversity of opinion has been expressed in regard to the origin of the spinal nerves. Three different propositions have been offered. 1. That the spinal nerves are directly connected with the encephalon by the continuation of their root fibres with the longitudinal fibres of the medulla spinalis. These root fibres pass through the grey matter of the cord, and so are influenced by its vesicular matter—which is capable of exerting an independent operation through them. 2. That the medulla spinalis is the ganglionic centre of all the root fibres proceeding from it; each set of nerves being connected only with its own segment of the cord, or

only with those just above or just below it. 3. Is a combination of both the preceding. That some fibres go to the encephalon by the longitudinal columns, and others terminate in the grey matter. That those fibres which carry sensory impressions produce their effect by their direct continuity with the encephalon, and those fibres which transmit motor influences from the encephalon do so by the fibres coming directly from the brain.

The roots at the spinal nerves pass out of the canal of the intervertebral foramina in company. Within the foramina the posterior roots have upon them a ganglion. The anterior root is imbedded in this ganglion, but is separable from it, as its fibres do not go to form a part of the ganglion. On emerging from the foramina, the two roots unite to form a true spinal nerve. They then divide into an anterior and a posterior branch, of which the anterior is the largest. The posterior goes to be distributed to the posterior aspect of the body, while the anterior is distributed to the anterior aspect. The first, or suboccipital nerve, offers an exception to the general rule. Its posterior root is the smaller, and frequently has no ganglion upon it. The first eight pairs from above downward are called the cervical ; the next twelve the dorsal ; and the next five the lumbar ; and the remaining six pairs the sacral.

The *cervical plexus* is made up of the first four cervical nerves, and is distributed to the head and neck. The *brachial plexus*, made up of the four lower cervical and first dorsal nerves, is distributed to the upper extremity. The *dorsal nerves* are distributed to the thorax and abdomen. The *lumbar plexus*, formed by the five lumbar with the last dorsal nerve, with the sacral plexus formed by the lumbo-sacral and four sacral nerves, is distributed to the lower extremities and the pelvis, with the organs of generation.

The medulla oblongata, or the prolongation upwards of the spinal axis, extends from the pons varolii to a point opposite the upper border of the atlas. It is conical in shape, and is a little more than an inch in length. In its four principal columns may be distinguished on each side (1) the corpora pyramidalia situated on either side of the fissure which divides the medulla oblongata on the middle line in front, called the *fissura longitudinalis anterior*. They taper slightly from above downwards. Tracing their fibres upwards, we find that for the most part they enter the *crura cerebri*, and at last diverging and becoming mingled with grey matter, they form the corpora striata. 2. The corpora olivaria, situated immediately external to the preceding, from which they are separated, as well as

from the *corpora restiformia*, by a well-marked groove. They receive their name from their slight resemblance in shape to the olive. Their fibres pass upwards to the pons varolii and then divide into two bands: one goes upward and forward to the crura cerebri, and thence to the thalamus opticus, while the other goes upward and backwards to the corpora quadrigemina. 3. The corpora restiformia, occupying the posterior half of each lateral column of the medulla oblongata. The fibres from these bodies pass entirely into the cerebellum. 4. The pyramidalia posteriora, whose fibres pass through the *crura cerebri* to the thalami optici. These bodies are separated from each other by the posterior median fissure, and from the corpora restiformia in front by a slight groove. They have often been reckoned as a part of the corpora restiformia.

We may trace the strands which connect the medulla oblongata with the centres above *upwards*, and we shall find that the longitudinal bands that connect the cerebrum with the spinal cord are divided into an anterior and a posterior tract by the fibres of the *great commissure* of the cerebellum (i. e., the pons varolii); and that the anterior tract is the motor, and the posterior the sensory. This fact may be determined by the character of the nerves arising from these portions respectively, as all the motor nerves of the encephalon arise from the anterior tract, and all the sensitive from the posterior portion. In the medulla oblongata we find the origin of all the encephalic nerves, save those of special sense. These have been arranged into three pairs by those who consider the cranium to be composed of three vertebræ. The arrangement here given is not, however, absolutely correct, inasmuch as some of the nerves here called esodic possess the endowments of an exodic nerve, in a measure, and vice versa.

The three sets of nerves may be arranged as follows :—

Esodic or Sensory.	*Exodic or Motor.*
I. Large Root of Trifacial.	Third, Fourth, Small Root of Fifth, Sixth, and Facial.
II. Glossopharyngeal.	Hypoglossal
III. Pneumogastric.	Spinal Accessory.

The *trigeminus* most nearly resembles a spinal nerve, since it arises by two roots, one of which has a ganglion upon it. This root is entirely a sensitive nerve at its origin, and nearly so at its distribution. It receives a few motor fibres from the motor communis. It is distributed by its opthalmic branch to the skin of the forehead and anterior part of the cranium; to the mucous membrane of the eye and nose; also a branch to the integument at the extremity of the

nose. The other, or small root, partly sensitive, (the branch distributed to the tongue and the one to the teeth of the lower jaw being sensitive,) is distributed to the muscles concerned in mastication.

The *motor communis*, or third pair, distributed to the superior, inferior, and internal rectus, the levator palpebræ and inferior oblique, is almost exclusively motor, though possessing a few sensitive fibres, probably from the large root of the fifth pair.

The *patheticus*, or fourth nerve, distributed to the superior oblique, is entirely motor.

The motor externus, or sixth, distributed to the external rectus, is also entirely motor.

The facial, or portio dura, of the seventh, distributed to the muscles of the face, concerned in expression, &c., is styled the *general motor* of the face. It, however, possesses some sensitive filaments derived from other nerves.

The esodic of the second pair given above—the glossopharyngeal—derives some motor filaments from anastomosis with other nerves. It is distributed principally to the mucous membrane of the base of the tongue and fauces, the tonsils and the mucous glands of the mouth. It has two gangliform swellings—the ganglion jugulare and the ganglion of Andersch.

The exodic of this pair—the hypoglossal, also sometimes called the *motor linguæ*, is distributed in great measure to the muscles of the tongue. It is, besides, distributed to the muscles of the neck, by which the movements of the larynx are produced.

Of the third pair, the pneumogastric is regarded as the esodic, and the spinal accessory as the motor. It seems proven that the pneumogastric at its root is purely sensory. It, like the posterior roots of the spinal nerves, presents a ganglion soon after it leaves its origin, the medulla oblongata. An interchange of fibres takes place between the pneumogastric and the spinal accessory at the *ganglion jugulare*, so that its trunk possesses double endowments. In some part of its distribution it seems to be purely sensory, and in others purely motor. Its distribution is very extensive. It sends a motor branch to the pharynx ; to the larynx in the superior laryngeal a sensory nerve, and in the inferior or recurrent laryngeal a motor nerve ; a branch to the œsophagus and trachea : branches to the lungs, the heart, and all the organs of the abdomen, except the kidneys.

The spinal accessory becomes incorporated with the pneumogastric,

as has been seen, to a great extent, and gives to it its motor endowment. Its terminal branches are sent to the sterno-cleido-mastoid and the trapezius.

Table of the Anatomy of the Diastaltic System.

Exodic, or Incident Nerves.	*Centre.*	*Exodic, or Motor Nerves.*
I. Trifacial, arising from 1. The Eyelids. 2. The Extremity of the Nose. 3. Mucous Membrane of Nose. 4. The Fauces. 5. The Face. II. The Pneumogastric, from 1. The Pharynx. 2. The Larynx. 3. The Bronchia. 4. Heart and Organs of Abdomen, except Kidneys. III. The Glossopharyngeal, from 1. The Fauces and base of Tongue. IV. The Spinals, from 1. General Surface of Body. 2. Glans Penis vel Clitoridis. 3. The Anus. 4. Cervix Vesicæ. 5. Cervix Uteri.	THE MEDULLA OBLONGATA. SILVANUS WILLOBEE.	I. The Patheticus. II. The Motor Externus. III. Small Root of the Fifth. IV. Facial, distributed to 1. Orbicularis Palpebrarum. 2. To Muscles of Face in general. V. Pneumogastric, through Spinal Accessory to 1. Pharynx. 2. Œsophagus, Cardia, &c. 3. Larynx. 4. Bronchiæ. VI. Hypoglossa[1]. VII. Spinal Accessory. VIII. Spinal, distributed to the 1. Diaphragm. 2. Intercostal Muscles. 3. Abdominal Muscles. IX. Sacral, distributed to the 1. Sphincters. 2. The Expulsors, the Ejaculators, Fallopian Tubes, the Uterus, &c.

The foregoing is, indeed, an incomplete view of the Anatomy of the Diastaltic System, but it is, perhaps, sufficient for our present purpose.

2. *Physiology of the Diastaltic System.*

The Physiology of the Diastaltic System, although in a measure recognized by some of the earlier physiologists, was not examined nor understood in its true meaning, before the investigations of Dr. Marshall Hall. His labors, with those of his predecessor, Sir C. Bell, displayed new features of the nervous system and opened a new field for discovery.

Dr. Hall was led to make the investigations which resulted in the full substantiation of his grand discovery, by observing that the tail of an eft *moved* after it was separated from the body, when excited by the prick of a scalpel. This fact, which had before been often noticed by physiologists, had never received its proper interpretation. Dr. Hall's explanation of this phenomenon was this, (and subsequent experiments have only proved it to be the true one,) that the prick of the scalpel, or the irritation of the nerve at its distribution, produced an impression which was communicated to the nervous centre by the nerve irritated, and which has been named the sensory nerve, and that from thence an influence was sent out through the nerve called by Sir C. Bell the motor nerve, to the muscles of the part, causing them to contract. This nervous agency he considered to be the same as that called by Haller the *vis nervosa*.

Another experiment, performed by him, illustrates well the character of the diastaltic action. A horse, prostrated by a blow upon the anterior lobes of the brain, by which their function was destroyed, manifested no evidence of sensation or volition when the skin of the face or any part of the body was irritated, although respiration commenced very soon after the blow was given. When, on the other hand, the eyelash was lightly touched with a straw, the eyelid was immediately closed by the action of the orbicularis. When the cornea was touched, the eyeball rolled outward by the action of the abducens (motor externus). When the verge of the anus was touched, the sphincter contracted forcibly, the tail was raised, and the vulva drawn towards the anus. On the destruction of the medulla oblongata none of these actions could be excited. These acts, from the destruction of the cerebrum, must have been independent of volition and consciousness, as also of sensation. It is not often that we can *prove* that acts of this kind in man are independent of sensation; and the fact that we do not see the same movements produced in man, in all cases, where a solution of continuity of the medulla spinalis has occurred from accident, that we observe in the lower animals when section of the cord has been made, has been considered by some as evidence that the latter are possessed of properties of which the former are destitute. This difference may, however, be accounted for, by considering the shock produced upon the system by injury of the cord at any part, sufficient to destroy its function, when compared with that caused by section of the cord with a sharp knife. Many instances have occurred, since the attention of physiologists was turned to this subject, in which similar actions to those of the lower classes of animals have been witnessed. A case of paraplegia is mentioned by John Hunter, in which he saw diastaltic motions produced; and on asking the patient if he *felt* the irritation by which they were induced, he received for reply, "No, Sir, but you see that my legs do." We may consider it proved that the diastaltic actions are independent of sensation and of consciousness; that the medulla spinalis is independent of the brain in its proper function, and is the centre of a distinct system of nerves—*distinct* so far as their function is concerned,—formerly it was considered as merely an appendage of it.

It is perfectly true that sensation often *accompanies* the actions called diastaltic, as in deglutition, respiration, &c., but it cannot be considered as necessary to the performance of these actions. In confirmation of this, may be given a case cited by Dr. Hall, of a

man in whom there was complete hemiplegia of the left side, with entire loss of volition and consciousness, yet all the diastaltic functions were properly performed. On tickling the palm of the left hand, the fingers were moved. On tickling the sole of the left foot, the extensors were put in action strongly, especially those of the great toe.

The diastaltic actions are often exerted in opposition to the will. The act of respiration (which is purely diastaltic) will be carried on in spite of all efforts to the contrary, as the demand for fresh air becomes more imperative from its being withheld. A child, in a fit of passion, may "hold his breath" for a time, but be his obstinacy ever so great, it will be overpowered by the demand of the system for aërated blood.

The actions of the diastaltic system are never wholly suspended. To use the words of Dr. Hall, "the reflex (diastaltic) system never sleeps." The function of respiration is maintained as well during sleep as in the waking hours, and so also the other acts of this class.

The true spinal (or diastaltic) system places us in physical relation with the external world, as, by the cerebral system, we are put in relation to it mentally. Its actions are those which pertain to the due performance of the organic processes. On it depend the functions of ingestion, of retention and expulsion, as regards the animal economy. It also exerts a protective agency, as in the eyelids, &c. All these acts are purely of the diastaltic character, and are accomplished through the medium of esodic and exodic nerves, with their connecting centre—the medulla spinalis and the medulla oblongata, and by the agency of the vis nervosa, so called. These several systems of esodic and exodic nerves, with their centres, may be considered to form a series of arcs. Thus we shall have the arc of respiration, that of deglutition, &c.; a separate arc for each function of the body. We find that those parts of the diastaltic system which are the centres of actions the most important in sustaining life, are, according to their necessity, the best protected. For instance, the aëration of the blood, which must be continually performed, is under the control of an arc whose centre is located where it receives the greatest protection. That of deglutition is also very well protected. But those arcs which preside over expulsion, &c., have their centres in parts which are located in more exposed situations.

We may, with Dr. Hall, arrange a table of the physiology of the diastaltic system, as we have of its anatomy.

Table of the Physiology of the Diastaltic System.

I. The Excited Action.
1. Of the Eyelids and the Iris.
2. Of the Orifices { Larynx. Pharynx.
3. Of the Ingestion.
a. Of the Food.
ai. In Suction.
bi. In Deglutition.
b. Of the Air, or Respiration.
4. Of Exclusion.
5. Of the Expulsors.
a. Of the Fæces.
b. Of the Urine.
c. Of the Semen.
d. Of the Fœtus, or Parturition.
6. Of the Sphincters.
a. Of the Cardia.
b. Sphincter Ani.
c. Sphincter Vesicæ.
II. The Direct Influence.
1. In the tone { Of the Muscular System.
2. In the irritability {

Let us examine somewhat more closely into the character of the actions performed by the parts mentioned in the preceding table, that we may more clearly see their relations to the Diastaltic System.

First, the *arc* of the *closure* of the *eyelids*, which are situated at one of the orifices guarded by this system. This consists of the

Esodic.	*Centre.*	*Exodic.*
The Ophthalmic Branch of the Trifacial.	Medulla Oblongata.	Branch of the Facial.

We have seen in the experiment of Dr. Hall upon the horse, how the closure of the eyelids was produced by the irritation of the straw upon the eyelash. The effect was produced through the arc above given; the impression being communicated to the medulla oblongata through the trifacial, and a motor impulse sent from thence to the orbicularis palpebrarum through the facial. In the same way the effect is produced if the conjunctiva be irritated by the contact of dust or by the want of moisture; the lids are immediately closed. In sleep the power of the will over the levator palpebrarum is suspended, and the diastaltic system causes the orbicularis to take the natural state of the sphincters—that of contraction. Here we see the protective agency of this system. In winking, which we are continually and unconsciously performing, we see it fully manifested. We may, for a time, by an act of volition, keep the levator palpebrarum in a state of contraction, but the diastaltic system soon prevails over the power of will, and the eyelid is shut. In paralysis of the esodic nerve, we see, in its evil results, as inflammation of the conjunctiva, &c., the benefit of this protective agency.

In the *contraction* of *the iris* from the stimulus of light, the diastaltic arc is not clearly determined, though the exodic nerve is undoubtedly the motor oculi, as may be seen by irritating the trunk of that nerve. The esodic seems to be through the optic nerve. This can hardly be considered as of the *purely* diastaltic character, since a nerve of special sense is supposed to form a part of the arc.

In the *closure* of the *larynx*, we have as the *arc*, the

Esodic.	*Centre.*	*Exodic.*
Superior Laryngeal.	Medulla Oblongata.	Inferior Laryngeal.

If the rima glottidis of one of the inferior animals be touched lightly by a feather, immediate contraction of the glottis will follow. So long as the connection between the larynx and the medulla oblongata is not interfered with. On destroying the medulla oblongata, or making section of the nerves mentioned as entering into the formation of this arc, the irritation does not produce this result. The same effect is produced by stimulating the part of the nerve in connection with the centre after section of the esodic, simply, though in a less degree. Here, as elsewhere, the greatest effect is gained by applications made to the surface to which the nerve is distributed. The experiments of Dr. Reid confirm the truth of the assertion, that the superior laryngeal is the esodic, and the inferior laryngeal the exodic nerve. The irritation to the nerves of the larynx, caused by the inhalation of carbonic acid gas, produces contraction of the larynx and affords a good example of the protective agency of this system of nerves.

The *arc* of *respiration* is one of the most important in its function. It is composed, according to Dr. Hall, of the

Esodics.	*Centre.*	*Exodics.*
1. Trifacial. 2. Pneumogastric. 3. Spinal.	Medulla Oblongata.	1. Spinal Accessory. 2. Intercostal. 3. Phrenic. 4. Spinal.

There can be no doubt that the Pneumogastric is the chief of the esodics, and in ordinary respiration it is almost the sole one. We find that on section of this nerve, the frequency of respiration is diminished about one-half, and also that irritation of the segment in connection with the medulla oblongata, causes efforts at respiration. If it acts by conveying sensation, we should suppose any irritation of the nerve would be productive of much pain ; but we find that when the trunk of this nerve is pinched or pricked, the animal does not give evidence of suffering nearly as acute pain as from like treatment of a spinal nerve, or of the trifacial. The proper point for the application of stimulus is the periphery, or the surface to which the nerve is distributed. Here the natural stimulus is the presence of carbonic acid in the air-cells or of venous blood in the capillaries. We see the action of the trifacial and spinal nerves in producing respiration when a stimulus is applied to the surface of the body, as, in case cold water is thrown in the face, an act of inspiration is immediately induced. Cold air also will produce a like effect. This is well shown (and

also that respiration is independent of any function of the cerebrum) in a case mentioned by Dr. Oliver in his work on Physiology, of an infant on whom craniotomy was performed and a large part of the contents of the cranium removed. The child cried lustily on being delivered. Here, as usually, the stimulus of the cold air on the surface acted through the trifacial and spinal nerves as the esodics, and the medulla oblongata—which was doubtless uninjured by the operation of craniotomy—as a centre, and the exodics above-mentioned, to produce inspiration and crying. Similar phenomena are seen in the case of anencephalous fœtuses. A case mentioned by Dr. Ley, and referred to by Dr. Carpenter, is in point. A man whom he saw had evidently disease of the Pneumogastric, and as a consequence, laborious breathing; yet the patient affirmed that he felt no uneasiness in the chest. Volition and consciousness may modify the respiration to some extent; for we see that the breathing of waking and consciousness is different from that of sleep or coma.

The exodics of Respiration are those nerves styled by Sir C. Bell the respiratory nerves. The phrenic, called by him the internal respiratory, is a spinal nerve, and the most important of the exodics.

The actions of yawning, sighing, coughing, sobbing, laughing, crying, sneezing, and hiccough, are produced by the agency of the same arc, with some modifications, as the act of Respiration.

The Arc of Deglutition, according to Dr. Carpenter, is composed of the

Esodics.		*Centre.*	*Exodics.*	
Glossopharyngeal.			Pharyngeal,	Branches of the Pneumogastric.
Trifacial to Fauces.			Œsophageal,	
Superior Laryngeal, Œsophageal, Cardiac,	Branches of the Pneumogastric.	Medulla Oblongata.	Cardiac,	
			Recurrent Laryngeal,	
			Hypoglossal.	
			Trifacial to Lower Jaw.	
			Facial.	
			Spinal from Cervical Plexus.	

This is one of the arcs of ingestion, and exhibits perhaps as well as any, the character of this kind of action.

That the Glossopharyngeal is the principal esodic of this arc, would seem to be demonstrated from its distribution to the mucous membrane of the fauces. Additional evidence of this fact is gained by irritation of the trunk of the nerve, which will produce distinct acts of deglutition, if the nerve be not injured in any part of its course. The trifacial by a few fibres sent to the fauces assists in forming the esodic communication between the pharynx and the medulla oblongata.

As the food passes down the œsophagus it is forced along by the contraction of the muscular walls of that tube upon it. These contractions are not excited *simply* by the pressure of the food upon the

muscular fibre, but are induced through diastaltic action. The esodic, here, is the œsophageal branch of the pneumogastric. Irritation of this nerve produces contractions of the œsophagus, which are continued to the cardia. The cardiac branches, however, furnish the most direct medium of communication between the nervous centre and the cardiac sphincter. The table gives the esodics as determined by the experiments of Dr. Reid.

In some of the lowest animals, the performance of the function of ingestion of food seems to be the main use of the nervous system. All the actions of such animals are considered to be purely reflex. In the polypes and some others, we find the mouth, or the aperture of the stomach, surrounded by tentacula, which, by their contraction, bring whatever may come in contact with them within the reach of the muscles surrounding the opening, which close upon and retain it. The pharyngeal muscles, in man, act the part of the tentacula of the polyp and hydra, and the muscles of the œsophagus that of the muscles about the aperture of the stomach.

There is no difficulty in perceiving that these acts are purely reflex, since they cannot be produced nor restrained by an effort of the will. The contact of a small bit of food, or of a small quantity of saliva upon the fauces, is capable of exciting the act of deglutition; but without the stimulus of some body in contact with the fauces, it cannot be excited. After it is induced, the strongest effort of the *will* will be of no avail in restraining it. The only mode in which the will can effect the act, is in bringing substances in contact with the fauces or by withholding them. This act is continued during sleep; as in the swallowing of the salivary secretion. Also in apoplexy, when the functions of the brain are suspended. It is also seen in animals from which the cerebrum has been removed. Anencephalous infants often swallow as well as those in whom the brain is perfect. Section of the nerves entering into this arc, or injury to the centre, immediately interferes with the performance of this function. Here is a case of diastaltic action without sensation. Sensation precedes it, but after the substance exciting sensation has passed into the pharynx, it causes no further consciousness of its presence, unless by its size or temperature.

It is believed that, although the acts by which the food is prepared for deglutition in the case of the higher animals are dependant on the will for their accomplishment, still the act of *suction*, in the infant, is at first purely diastaltic, since anencephalous infants have been seen to perform it as readily as those perfectly developed.

Thus we see in the ingestion and digestion of the food—1st, an act almost wholly dependant on the will—that of mastication: 2d, an act of the pharynx in swallowing, which is purely diastaltic, and is *accompanied with* sensation: 3d, the act of the œsophagus, diastaltic *without* sensation: 4th, the act of the stomach and intestines, which is mostly, doubtless, independent of the spinal cord, and is called peristaltic. At the termination of the Alimentary Canal, we have the act of egestion, which is diastaltic in great part, and of which the arc is made up of the

Esodics.	*Centre.*	*Exodics.*
Spinal Nerves to the Rectum Perineum, &c.	Lower part of the Cord.	Spinals to the Rectum, Sigmoid Flexure, Levator Ani, and Abdominal Muscles.

Egestion is accomplished through the agency of the muscles of respiration, in a measure—that is, the lungs are filled with air, the glottis is closed, and the diaphragm fixed—then the muscles of the abdomen—with the levator ani, can contract upon the contents of the abdomen, the muscular walls of the rectum and the large intestine also assist in this action. At the same time, the sphincter is relaxed and the contents of the intestine discharged in the direction of the least resistance.

This act is in a measure under the control of the will. The sphincter ani is, however, maintained in a state of moderate contraction by the agency of the spinal cord alone, as we see in the experiments upon the lower animals that the sphincter is immediately relaxed on the destruction of the spinal cord. The action of the expulsors is just about evenly balanced by the sphincters; the latter being slightly the greatest. The stimulus which would cause the former to contract forcibly, would produce sensation, and then the power of the will would come in to counteract this expellent force or to direct it. Or before the stimulus of the matter to be excreted upon the extremities of the esodic nerves be sufficient to excite contraction of the expulsor muscles, a regard to future comfort, or a regard for the laws of health may cause us to induce it by the will, principally, doubtless through the abdominal muscles and others concerned in respiration.

The arc of micturition is essentially the same as that of defecation; with the exception that some of the esodics arise from the mucous lining of the bladder instead of the rectum, and that some of the exodics are distributed to the muscular coat of the bladder instead of the rectum.

In parturition we find a function which is partly under the control

of the medulla spinalis and partly not so. The contractions of the uterus during the first stage of labor are almost purely peristaltic, and therefore are not influenced in any great degree by the spinal centre. And the fact that the infant has been born after the death of the mother, that is, after the nervous centre had in great part or entirely ceased its action, would seem to indicate that it may be an act not properly reckoned among those called diastaltic. In this case the resistance of the soft parts would be measurably overcome by their want of nervous power, and the peristaltic action of the uterus alone might suffice for the completion of the labor. But many things afford evidence that these contractions are generally considerably influenced by the diastaltic system. The arc in this case is made up of the

Exodics.	*Centre.*	*Exodics.*
Nerves to interior of Uterus and Vagina. Do. to Ovaries, and Rectum, and Bladder. Do. to surface of Abdomen. Do. to Mammary Gland. Trifacial to Face.	Lumbar part of Cord.	In 1st and 2d Stage, Nerves to Muscular Walls of Uterus. All but 1st Stage, do. to Abdominal Muscles and to Glottis.

Says Dr. Tyler Smith, "Contraction of the uterus of a diastaltic kind, may be excited by irritation of the mammæ, as in the act of suckling the infant; by the impression of cold upon the vulva or abdominal surface; by irritation of the rectum as by stimulating enemata; by gastric irritation, as in drinking a gulph of cold water; by ovarian excitement as in the occurrence of abortion from the menstrual nisus; by irritation of the vagina or pressure on the perineum and by irritation of the os and cervix uteri. These facts supply the proof that the uterus is endowed with reflex action, and that its exodic nerves are in relation with the mammary, pubic, rectal, pneumogastric, ovarian, and vaginal nerves, and the nerves of the os and cervix uteri as esodic nerves.

That the internal surface of the uterus possesses incident spinal nerves is proved by the occurrence of vomiting, &c., from uterine irritation.

There is no other organ, not even the stomach, which can be excited by so many distinct organs, or which acts as such an extensive excitor of motor action in other parts, both in the impregnated and unimpregnated states, as the uterus."

With this imperfect sketch, we close our essay on the Diastaltic System—a system which, in its Anatomy, Physiology, Pathology and relations to medicine, offers a wide field of interesting and profitable investigation and discovery to the earnest and faithful student.

Selections from Favorite Prescriptions of Living American Practitioners. By HORACE GREEN, M.D., LL.D., &c.

Cathartics and Laxatives.—(Continued.)

Cathartics and Laxatives may be classed together, although as pharmacological agents, a distinction between them is of considerable importance in practice.

Cathartics are usually divided into purgatives and laxatives. *Purgatives* are those medicinal substances which, by producing a temporary irritation on the mucous membrane of the intestines, excite the action of the exhalent and secreting organs of these parts, causing them, thereby, to evacuate their contents.

Laxatives are those agents which, by their relaxing efforts on the intestines, excite alvine evacuations without occasioning irritation, or stimulating the exhalents of this tube.

From a very early period in medicine, purgative remedies have been in greater requisition than medicines of any other class ; and physicians of all ages have considered them as the most effectual, certain, and valuable of all other therapeutical agents. In the intelligent administration of these remedies, it is necessary to consider their immediate and remote effects, as well as the anatomical structure and physiological relations of the parts affected by purgatives. Purgatives act powerfully on the mucous membrane of the small and large intestines ; it is only by accident that the stomach is affected. An irritation is set up on the intestinal surface, by exciting the exhalent and secreting organs, by which action, the serous and mucous discharges are greatly augmented.

The excretory ducts of the liver and pancreas open on the interior of the duodenum, and the irritation of their extremities is communicated to these glands, by which their secreting functions are much increased. The fibres of the muscular tunic, through which the vermicular motion of the intestinal canal is effected, becoming stimulated by the action of purgatives, have their contractions accelerated, whereby the peristaltic action of the intestines becomes more rapid, all of which tends to urge their contents on towards the rectum.

"The irritation caused by purgatives on the inner surface of the intestines, increases the secretions of the liver and pancreas, as well as those of the mucous follicles, covering this surface ;—it augments the energy of the intestinal exhalents ;—all these products flow into

the alimentary canal, by which means all the abdominal organs are disgorged. * * During their operation, the blood is carried, in increased quantity, towards the abdomen; there is, then, more heat and increased movement in this part of the system; this increased action of the abdominal organs exercises a derivative or revulsive effect with respect to the head and chest. The irritation produced by purgatives on the nerves distributed over the intestinal surface, is communicated to the plexuses of the ganglionic nerves, to the spinal cord,—rarely to the medulla oblongata; this movement is diffused over the whole system, and gives a shock to the entire frame." *

In prescribing cathartics, regard should be had to the fact that each purgative substance is characterized by a peculiarity of action, as regards the part of the intestinal canal affected by it; mercurials produce their effect, mainly on the upper portion of the tube; gamboge exerts its influence on the stomach, while aloes, passing by the superior portions of the intestinal canal, spends its powers on the inferior part of the tube. Hence the importance of exercising care in the selection of a cathartic to be prescribed, that the article may be adapted to the impression we desire to make.

When we wish to evacuate the contents of the bowels, without occasioning irritation, or any increased action of the exhalants,—as in those diseases in which irritation or inflammation of the gastro-intestinal surface already exists,—we then have recourse to laxatives or aperients.

In disease, cathartics may be administered at any period during the twenty-four hours; ordinarily, they are best given in the morning, when the stomach is empty. In intermittent diseases they should be administered during the period of intermission.

Most physicians of experience have a favorite *pill*, which they are accustomed to employ as their ordinary, every day cathartic. Pills composed of the following ingredients have been used for many years, by a physician of large experience and extensive practice, in Vermont:

℞. Extract. Aloës Pulveris. - ℥ij
Guiaci Pulveris. - - ℥j
Gambogiæ Pulveris. - ℥iss
Saponis - - - ℥j

Fiat massa et in pil. lxxxii æquales div. sumat ij vel iij pro dosi.

Pills, made with care, of these ingredients, in the above propor-

* A Manual of General Therapeutics, &c. By D. Spillan, M.D., London, p. 277.

tions,—the materials being intimately pulverized and blended,—constitute a most excellent, ordinary purgative. From two to four, taken at bed-time, will be followed, the next morning, by decided catharsis, without producing, ordinarily, any disturbance of the stomach, whatever.

Prof. P., of New England, an old and experienced practitioner, recommends the following as "a valuable purgative, and every day cathartic:"

℞. Ext. Aloës Pulv.
Gambogiæ Pulv. aa ʒj
Hydrarg. Chlo. Mite.
Jalapæ Pulv.
Saponis dur. - aa ʒss

Ol. ricini. syrupi. q. s. Fiat Massa, in pil. lx æquales, div. quorum capiat ij vel iij pro dosi.

℞. Ext. Aloës Pulv. ℈ss
Gambogiæ - ʒj
Rhei Pulv. - ʒss
Olei Cinnamonii m. xx.

Syrupi rhamni q. s. Ft. Massa in pilulas, 120 dividenda.

The above is the favorite laxative pill of a distinguished lecturer and practitioner of Massachusetts.

For overcoming habitual constipation in dyspeptic patients, the following are useful pills:

℞. Aloës Socat.
Rhei Pulveris. aa ʒij
Pulv. Aromat. - ℈ij
Saponis - - ʒj

Syrup. rhamni q. s. Fiat Massa in pil. lx div. quorum sumat ij pro dosi.

℞. Extract. Aloës Pulv.
Rhei Pulv. - aa ʒj
Ipecac. Pulv.
Sapon. dur. - aa ʒss

Fiat Massa et in pil. xxx div. sumat i vel ij pro dosi.

By some practitioners, the above pill is preferred, in the habitual constipation of dyspeptics.

The following were the favorite anti-dyspeptic pills of Dr. Chapman:

℞. Extract. Aloës - ʒj
Ipecacuanhæ Pulv. ℈j
Mastich - - ʒj
Olei fœniculi gtt. xx

Fiat Massa in pil. xl div. sumat una mane nocteque.

Many distinguished physicians of this country are accustomed to combine a small amount of calomel and tartarized antimony, in their ordinary aperient pill :

℞. Extract. Aloës - - ʒss
Rhei Pulv. - - ʒi
Hydr. Chlorid. Mite. gr. iv
Ant. et Potass. Tart. - gr. ij
Misce. intim. Ft. Massa et in pil. xxx divid. sumat ij, pro dosi.

The above are the favorite cathartic pills of many Southern practitioners.

With many patients, aperient mixtures, or electuaries, are preferred to pills. The following mild laxative mixture, which was originally prescribed by an eminent physician of Virginia, has been since employed by many practitioners of our acquaintance,—all of whom speak of it as a most excellent and efficient aperient :

℞. Aloës Soc. pulv. ʒv
Sodæ Bicarb. - ʒiss
Tr. Lavendul. comp. ℥ss
Aquæ puræ - Oj
M. Fiat Mistura, cujus capiat coch. j mag. quotidie.

After constipation is overcome by the administration of the medicine in the above doses, a teaspoonful taken at bed-time will in most persons be sufficient to keep the bowels in a soluble condition.

In cases of constipation, attended with flatulence or acidity, an experienced practitioner of Virginia, highly recommends the subjoined :

℞. Extract. Aloës pulv. ʒiij
Potassæ Bicarb. - ʒvj
Syrupi. Rhei Aromat. ℥ij
Sp. Lavendul. Comp. ʒij
Aquæ puræ - - ℥vj
M. Fiat Mistura. cujus capiat coch. parv. una meridie noctique.

Physicians are frequently called on to prescribe for cases of habitual, or occasional costiveness, in which laxatives, although indicated, yet have the effect to weaken the patients, or induce debility of the alimentary canal, whenever they are administered. Under such circumstances, our colleague, Professor Peaslee, has been accustomed to employ, for many years, in his practice, the subjoined mixture, which is a combination of a tonic and a laxative, and which, after years of experience in its use, he assures us, is admirably adapted to such cases—being especially useful in troublesome constipation occur-

ring in feeble persons, and in that which often attends convalescence from fevers and other severe diseases. It may be employed for several weeks in succession without irritating or weakening the alimentary canal:

℞. Rad. Columbæ contus. - ℥ss
Fol. Sennæ - - ℥j
Extract. Taraxaci - -
Mannæ - - aa ℥ss
Aquæ Fervent. - - ℥xij
Macera per horam, cola et
adde *Holland Gin* - ℥iv

Misce sumat cochleare mag. j vel ij pro dosi.

The above is also an excellent vehicle for the administration of iron and other tonics, in cases of anemia and dyspepsia, accompanied by constipation.

When it is desirable to employ a very certain cathartic in cases of obstinate constipation, arising particularly from inaction of the liver, or from other causes, the same physician places great reliance in the following mixture:

℞. Extract. Aloës - - ʒij
Extract. Taraxaci. - ℥ss
Sennæ Fol. - - - ℥j
Rhei contus. - - - ʒiij
Nucis Vomicæ pulv. - ʒiss
Aquæ Fervent. - - ℥xij
Macera per horam, cola. et
adde Magnesiæ Sulph. ℥iss
Holland Gin - - - ℥iv.

Cujus sumat. cochl. mag. pro dosi, secundâ quâque horâ, donec alvus soluta sit.

In robust adults, two tablespoonfuls may be administered at first, followed by one spoonful every two hours until relief is obtained.

A tablespoonful may be taken every night to prevent a recurrence of the constipation.

℞. Magnesiæ Carb. - - ʒij
Rhei pulveris - - - ʒiss
Tinct. Rhei - - -
Syrupi Simp. - - -aa ℥j
Aquæ Menthæ piper. - ℥iv

Misce. Fiat mistura cujus capiat cochl. mag. j. pro re nata.

The above is a very gentle and excellent aperient in some forms of dyspepsia, attended with flatulency or acidity of the stomach.

As a mild and refrigerant aperient in febrile complaints, the subjoined mixture may be given when a laxative operation is desired.

It may also be advantageously prescribed for patients laboring under torpidity of the liver.

℞. Infusi Sennæ comp. - ℥iij
Rhei pulveris - - ʒj
Tinct. Sennæ - - -
Tinct. cardam. co. - aa ℥iij
Syrupi Zinziberi - - ʒij
M. Fiat mistura cujus sumat cochl. ij ampl. pro re nata.

The physician is not unfrequently called upon to prescribe for patients enfeebled by chronic disease, in whose cases tonics, although indicated, are not well borne because of the presence of a deranged condition of the digestive organs. In such cases we have often administered for a week or ten days the following aperient alterative pill; after which tonics may, generally, be advantageously exhibited:

℞. Extract. Hyosciami - ʒj
Massæ ex Hydrarg. - ℈j
Ipecacuanhæ pulv. - - ℈j
Fiat massa. in pil. xl. div. sumat unam mane noctique.

Under the same circumstances as above, Professor T——, of New Haven, recommends the following:

℞. Hydrarg. chlorid. mite grs. iv
Capsici pulveris - -
Extracti Conii - - aa ʒj
Misce. Fiat mass. in pil. xxxii divid.

One of these pills may be administered morning and evening. In dyspeptic phthisis, in cases of ordinary dyspepsia, attended with inaction of the liver, the exhibition of these pills for a short time will often prepare the system for the administration of a tonic or supporting plan of treatment.

Dr. Abercrombie, of Edinburgh.—Sketch of his Life and Character.

This celebrated physician held a place distinguished in the annals of medical science, though he passed his life in the obscurity of a provincial city. He was one of the few members of his profession whose name transcended the limits of the place in which he lived, and whose labors were directed to an object somewhat higher than the art by which he flourished.

He was the son of an eminent Scotch Presbyterian clergyman, and was born in the year 1781, in the city of Aberdeen, where his

father filled one of the chief livings in the place, combined with a chair in the University, if we mistake not, to the rectorship of which his distinguished son, a few years ago, was elevated. He, of course, enjoyed the benefit of a sound education—an advantage of easy access to most of the natives of that country, and nowhere more so than in Aberdeen,—of which it is said, in a tone of complacency by the inhabitants, though often in a spirit of derision by their neighbors, that it has two Universities, while all England contains no more. He was an able scholar, in the Scottish sense of the word, though to the character of a high classic his claim might, in more southern latitudes, have been not so readily acknowledged. The Scotch Universities, indeed, have in this respect seldom produced a man who could vie with those of the South. The metaphysical disposition of the people, and their preference of useful to merely ornamental accomplishments, have incapacitated them from acquiring preëminence in such a field; and as they have not the habit of committing to memory, as in England, portions of those authors whom in early life they have studied, they are seldom able, even if inclined, to make any parade of the little they have learned. This, however, may be considered but a small objection to the qualifications of a physician whose reputation does not depend mainly on the facility with which he can construe the *anapæsta* into wretched English hexameters, or twist Latin into still more miserable nonsense verse.

A deficiency such as this might have been fatal to Dr. Abercombie in the South, where in answer to remarks that one "leading member of the profession was superficial, and another not particularly bright, it will be gravely stated, "aye, but see what amirable classics they are; they have the whole *anabasis* at their finger-ends:" but in Edinburgh, whither Abercrombie, after receiving the usual initiatory course of study in his native city, removed to complete his medical education and enter upon practice, it had no such effect. That city contained within its precincts men of ability, and frequently of European renown. The celebrated "Speculative Club," where Scott, Jeffrey, Brougham, Leslie, Playfair, Stewart, and a host of others, first fledged their wings and tried their powers, was then in its zenith; and the speculative turn of Abercrombie's mind made him welcome in a society where speculative discussions were then carried on with a brilliancy and a force of illustration and of fancy, which redeemed them from that repulsive dryness which had previously, and has since, been their lot. In this *arena*,

however, Abercrombie was not destined to become conspicuous. His comparative youth, and some degree of natural timidity, incapacitated him from entering into argumentary conflicts; and when, after a long course of study and reflection, he obtained a mastery over the subject, perhaps more complete and profound than any of them, the pen was the instrument by which he chose to give expression to his thoughts.

Meanwhile he entered upon practice; and, we believe, at first, and for many years, with that small success which in his profession is so often, and nowhere oftener than in Edinburgh, the lot of modesty when accompanied with merit. During a long time he remained in an obscure or unfashionable quarter of the town; but at last, by chance rather than otherwise, his desert was recognized, and he from that period remained the first in rank, reputation, and ability, among Scotch physicians. Latterly he had not an equal in Europe.

But though deeply learned in his own art, he did not consider it the only science in existence; and he was one of the few members of the medical profession whose character those unconnected with that body can feel pleasure in contemplating. He was not one of those who consider physic as the only subject worthy of consideration, and fees as the sole object deserving of attention. He belonged not to that numerous branch of the faculty whose whole soul is immersed in medicine — who never entertain a thought unconnected with it— whose whole existence is passed in the fabrication of pills, powders, and prescriptions, or in the contemplation of phlebotomy, lithotomy, and a host of like horrible operations. Abercrombie was looked down by persons of this grade. They hesitated not to style him a quack, because he was simple in his prescriptions, and to run him down as a "paper-stainer," because he devoted some share of his time to philosophy. Such was the estimation in which he was held by a portion of those worthies, the object of whose life seems to be to give a new interpretation to that gloomy passage of Cicero: *Hæc studia nobis pernascant*, &c.—who have appropriated it to medicine alone — who exclusively bestow upon this their dreaming moments and their waking hours — who, not satisfied with such agreeable meditations during the night, bestow upon them their first morning thoughts—of whom they are the constant companions by day, and the last reminiscences ere retiring to bed. But he was a man of whom any profession might be proud. He was one of the few followers of medicine whose talents would have secured him an honorable reputation in any honorable avocation; and whose worth

would have adorned any situation. He acquired an extensive practice without a shadow of sycophancy, and accumulated a large fortune without a shade of meanness.

If Abercrombie's benignant nature would have permitted him to look with superciliousness upon any, he must have looked with contempt upon these men, whose extreme devotion to their art might command approbation, were it not for the illiberal feelings it tends to cherish; and did it not, in nine cases out of ten, proceed not from any love of science, but solely from the ungenerous motives of running down a rival, or of satisfying the cravings of avarice. Such men consider any deviation from the usual routine as a trap for letting in the enemy (that is to say, their next-door neighbor), and every moment bestowed upon any other object than the "shop" as so much money taken out of the till. If a medical man of this sort were asked for a loan of his house, his goods, or chattels, for a day, perhaps he might answer he would take the subject into consideration; but if requested for an hour of his society on any subject unconnected with medicine, he will, without a moment's hesitation, reply by a stern refusal. If he take pen in hand for any other purpose than writing a prescription, or making out a bill, it may safely be sworn, without seeing the manuscript, that it has some connection, more or less intimate, with the everlasting subject of drugs. If he appears in print, it is almost invariably on some professional subject; and generally he is induced to give his thoughts to the world either by hope of present pelf, in the shape of hard cash, or of future pay from reputation in his art. The instances of medical men publishing on any topic beyond the immediate sphere of their profession are rare; and partial as they are to ringing the changes on the eternal text of physic, it may be questioned whether in the whole range of medical literature, there be a single author upon the more interesting subject of metaphysics, except the lamented subject of this memoir.

It was, we think, in 1818 that Dr. Abercrombie published his first work on the Intellectual Powers, and it stamped him at once as a writer of a high order. The publication soon acquired an extensive reputation, and it unquestionably was worthy of its fame. It contained many views original, if not profound; though perhaps it may be doubted by some whether he pursued his researches to that point of which the subject is susceptable, and be denied by others that he surpassed the investigations of the French philosophers of the last century, many of whose works are now consigned to oblivion, amid

the general and unmerited abuse heaped on all (with the exception of Voltaire) to whom the name of Encyclopediast could be applied. Abercrombie's work, however, though based on their speculations, is carried out on a principle diametrically opposed. The views of the French philosophers depend mainly on materialism, while the early education of the Scotch physician has given a tone to his pages almost too exclusively religious. Presbyterianism of the strictest Geneva school is stamped on every line; the stern fanaticism of Knox, and milder yet equally intense fervor of Wishart, were never more conspicuous in times whose rude and savage habits prompted the one to hurl out his anathemas in the pulpit, and the other to maintain his opinions at the stake, than in the modified views of Abercrombie—modified only because the age has become more civilized. Though comparatively passionless, he has adopted all their fervor—some may be disposed to add, all their fanaticism; for in the recent schism of the Scotch Church, Abercrombie took the side of the more extreme or seceding party, with a decision which must have told severely on his fortune and practice. Of his sincerity there could be no question; and if, in his work, he has failed in giving any bold and comprehensive views, and tracing out great causes to equally gigantic results, it is perhaps because in investigating such a theme as the Intellectual Powers, the mind ultimately becomes exhausted in the infinity of the subject.

Dr. Abercrombie's other works were an inquiry into the Functions of the Brain and Internal Organs; likewise a small work of a religious nature—a subject to which he had strong natural bias—published only a few days before he was so suddenly cut off. All of them indicate reflecting powers of a high order, though none have attained such celebrity as his first publication. The style of the whole is chaste and classical.

But it was not to his works, though most of them have gone through many editions, that Abercrombie was indebted for fortune. These rather were an obstacle to his progress, in the estimation of those who consider that a medical man has no right to devote attention to any subject beyond the limited sphere of his own profession. As a physician he stood unrivalled. His powers of detecting and discriminating disease were great, and could only be surpassed by his rare simplicity and sagacity in the administration of medicine—a system which, as already mentioned, exposed him to occasional obloquy in the eyes of the profession, though it enhanced his merits in the estimation of the public. His practice resembled that of the

celebrated Radcliffe, who was wont to say that he set out in life with ten remedies for one disorder, and finished by making one remedy suffice for ten diseases—with this difference only, that Abercrombie's prescriptions were simple from the first, and scientific to the last. In his mode of treatment he trusted more to aiding nature than evincing art; and he was often eminently successful in cases where every other means of alleviation failed. Many instances are known in which he succeeded by the simplest means, and not a few in which he saved the patient's life, merely by ordering a discontinuance of the harsh remedies employed by others, when he was called in at a period when all seemed hopeless. It was a source of surprise and regret to many that his abilities were not secured to the metropolis. His aversion to hospital monopolies and their intrigues prevented this; and perhaps fortunately for him: for if he had attempted to set out in metropolitan practice without some connexion with these institutions—he might have lived with the reputation of a visionary, and died in the position of a beggar. In Edinburgh he stood alone; he had many competitors, but no equal.

Another source of Abercrombie's success cannot be omitted in an impartial memoir of his life: he was connected with what is termed the religious world; and in no part of the kingdom is piety held in greater respect than in Edinburgh, though its counterpart, cant, is so general that it is very difficult to distinguish the counterfeit from the genuine coin; but Abercrombie's sincerity, we believe, was never called in question. Early trained and early introduced in the religious world, his connection with it was beneficial in superseding the necessity for that attachment to hospital practice which, in Edinburgh, as well as London, is considered essential to a medical man's success. He was accordingly never connected with any such institution, and consequently never enjoyed any opportunity of inculcating his precepts beyond that afforded by his works.

In personal appearance Dr. Abercrombie was a man about sixty years of age, with a figure under middle height, but well formed and singularly compact. His features were good and expressive; his eyes large and lustrous; and a finely-developed head afforded a true indication of the power that reigned within, though perhaps also evincing in its position a tendency to that disease of which he died. His whole appearance was highly prepossessing, and could not fail to impress the most careless observer with the conviction that the little man before him was far above the common herd. But, though thus highly gifted, Abercrombie was remarkably devoid of any show of com-

placency and pomposity He was, on the contrary, singularly modest and unassuming in his address. He was of a retiring but amiable disposition; and at the same time a man of true beneficence. He would disinterestedly attend, for weeks together, the most friendless stranger, whose forlorn lot it might be to be stretched on a bed of sickness. And, take him all in all, it is impossible to estimate too highly his abilities as a physician, or his worth as a man.

The Seat and Nature of Hooping Cough. By M. BEAU. Read before the Academy of Sciences, Paris. Translated from the *Gazette Medicale* for the MONTHLY.

Hooping cough is symptomatically characterized by a sort of convulsive cough, which so resembles, that it may be mistaken for it, that condition of imminent suffocation which is experienced when one swallows, as it is vulgarly called, *the wrong way.* The seat and the nature of this disease,—peculiar to infancy, which it often affects epidemically,—are still unknown. According to some authors, it is one form of bronchitis;—in the opinion of others, it is a pure and simple nervous affection of the air-passages;—according to others, again, it is a complex disease, belonging, at the same time, to catarrhal and nervous affections. The aim of this article is to show that hooping cough is an inflammation of the air passages, as I have learned from the various examinations of the cadaver which I have made. I will show, in addition, that this inflammation occupies a somewhat narrow and singularly circumscribed position; and, as we shall see, it is precisely the peculiar seat of this inflammation which will readily explain to us the characteristic symptoms of hooping cough.

Hooping cough, we have said, resembles the condition of imminent suffocation produced by the penetration of a drop of liquid into the larynx. Nothing remains to render the similarity complete, except to find in the material circumstances of the disease, the drop which falls from time to time into the larynx, and produces, as does that which is sometimes introduced therein during the act of swallowing, the effects of suffocation which we have noted. But the possibility of the fall of a drop of liquid exists also in hooping cough, as we shall endeavor to show.

The portion of the mucous membrane of the air passages which, as we have above stated, is inflamed in hooping cough, is that some-

what narrow zone which exists between the superior orifice of the larynx and the superior vocal chords. This rather limited supra-glottic region, as is well known, becomes gradually enlarged, in proportion as we ascend from the glottic opening towards the superior orifice of the larynx, so that its general form is somewhat like an *infundibulum*, or funnel, whose base is above at the superior orifice of the larynx, and the smaller end below at the opening of the glottis. This is the very point which my anatomical investigations have most positively shown me to be affected by inflammation. The mucous membrane forming this surpa-glottic funnel is red, slightly swollen, and often covered with a little muco-pus. Now, this muco-purulent secretion, when it exists in sufficient quantity, must fall or flow upon the glottis, and it cannot fail to be received there as a veritable foreign body. This, in fact, does takes place—that is to say, suddenly the glottis contracts, and from this there results a sharp hissing sound upon inspiration ; then there succeeds a spasmodic and jerking cough upon expiration, and this cough is followed by the rejection of quite a large quantity of phlegm suddenly secreted, in which the muco-purulent drop, the cause of all these symptoms, is diluted and brought away.

It now remains for us to show, by the assemblage of other characteristics of hooping cough, the truth of the symptomatology just developed.

The duration of hooping cough is usually divided into two periods,—a catarrhal period and a nervous period,—and from this very dividing line, we recognize in it a complex nature, belonging, at the same time, to catarrhal and nervous affections. The catarrhal period, in addition to the symptoms of intermittent and characteristic suffocation, is marked by general phenomena, such as restlessness, exhaustion, anorexia, painful weariness, and even sometimes fever. The nervous period, of much greater duration than the preceding, is attended only by the characteristic symptoms of suffocation, which, during this period, are both very marked and very frequent. It must be seen, that these two periods are perfectly intelligible, when considered as supra-glottic laryngitis. Indeed, in the first period, called catarrhal, there is restlessness, weariness, and fever even, because the supra-glottic laryngitis is in the acute stage. In the second period, called nervous, there are no longer general symptoms, because the inflammation has passed into the chronic stage ; and the local symptoms of characteristic suffocation are at the same time more intense and more frequent, because the secretion of muco-pus, which falls upon the glottis, is also both less viscid and more abundant.

The spasms in hooping cough are often hastened by some moral cause, such as a sudden emotion, anger, &c. This etiological circumstance, which is considered as a stamp of its nervous nature, is very readily explained by the inflammatory nature of the disease. In truth, we frequently see persons, affected by a humid rash of the face, present a sudden increase of the eruption under the influence of some sudden emotion. Why may not that which occurs in the secreting inflammation of the skin of the face, also happen in the secreting inflammation of supra-glottic laryngitis, thus provoking more readily a paroxysm of hooping cough?

Until now it has been said that the paroxysms of hooping cough are preceded by a peculiar sensation of stricture in the pharynx, or about the upper parts of the throat. This premonitory symptom is very naturally explained by locating hooping cough in the supra-glottic region of the larynx.

Finally, there remains the question of contagion, which is admitted in hooping cough, and which is easily understood, in accordance with the views forming the subject of this article. In fact, analogy naturally leads us to admit that the supra-glottic laryngitis, which gives rise to the symptoms of hooping cough, may be contagious, just as pseudo-membranous laryngitis and stomatitis and conjunctivitis are contagious. Certain corpuscles, retained in solution, and in some degree volatile, after having been expelled by expiration, may very easily be inspired by other individuals, and in that manner be deposited upon a healthy larynx, which thus becomes inflamed by contagion.

Of Fissure of the Anus, and its Radical Cure, without a Bloody Operation. By Dr. CHAPELLE. Read before the Academy of Medicine, Paris. Translated from the *Gaz. Hebdom.* for the MONTHLY.

There is in this disease a neuralgic element which is its principal constituent. This accounts for the inefficiency of the therapeutical agents employed for the cure of the wound alone. All topical agents which do not act vigorously upon the neuralgic element, have been and cannot fail to be powerless. Among the curative means prescribed for this affection, the incision of the sphincter, used by Boyer, and, since his time, adopted by most modern surgeons, has been the most successful. This operation acts in the same manner as the division of nerves in other neuralgias. Observation shows that the therapeuti-

cal result is the same whether the section is made at some distance from the muscle, or near to the fissure itself, another proof that the erosion of the mucous membrane is of but slight importance in this disease.

It was the decision as to the neuralgic character of this affection which led me to the discovery of a means for curing fissure of the anus, as simple as it is efficacious. Chloroform, dissolved in alcohol, is the means with which I have invariably succeeded.

I diminish or increase the proportion of chloroform according to the degree of sensitiveness of the patients. Ordinarily, I use the following :

℞. Chloroform - - 1 part.
Alcohol - - - 5 parts.

I proceed as follows : With the fingers of the left hand I separate the borders of the anus, then I introduce deeply into this opening a badgers hair brush, previously saturated in the chloroform solution, and then withdraw the fingers. The sphincter naturally presses upon the brush, expresses the liquid which it contains, which acts rapidly upon the contracted tissues, produces a severe and penetrating heat upon the contaminated surfaces, and particularly upon the points where the fissure exists. Soon after the abnormal contraction ceases, and the patient only feels the effect of the liquid applied.

This mode of treatment is quite inoffensive. It has no other inconvenience than the local and immediate pain which follows the application of the chloroform liquid, but this disagreeable sensation soon passes off. Fourteen cases of annal fissure are reported, in which this means was used with constant success. Of these fourteen cases, four were cured by a single application : six by two ; in three others it was necessary to have recourse to it three times ; and in one only, four applications were necessary before a cure was obtained.

Ribes' method of embalming, is to throw strong alcohol saturated with corrosive sublimate into the principal arterial trunks, to pour the same solution into the œsophagus and gastro-enteric tube, and then to place the body in distilled water and brandy saturated with corrosive sublimate.

An allegorical statue, representing pharmacy, has just been completed at Brussels, by M. Aug. Van den Kerkhoven.

REVIEWS AND BIBLIOGRAPHY.

"Nullius addictus jurare in verba magistri."

Trial of Charles B. Huntington for Forgery. Principal Defence,—Insanity. New York: John S. Voorhies, Law Bookseller and Publisher. 1857.

The good to be anticipated by this publication will be rather of a negative than positive character. We do not know that the moralist will gain by it any higher or better notions of humanity, or that the lawyer will draw from it any very valuable precedents, either of legal tactics, or judicial decisions; and we are very certain that no physician will rise from its perusal, the richer for the scientific or professional knowledge it contains.

Still we are glad the record of a trial so celebrated as this, has been perpetuated. In these latter days of evil, it may serve to show how grand proportions any given crime assumes, when false education, bad passions, and an artificial condition of society, push it onwards to a bold and unscrupulous development.

It may be of use, too, among legal reports, if it teach the lawyer no other lesson than this old and simple one—that in the unity of a defence lies much of its strength; for we see it stated, as if doubtful of its saving virtue, that the defence in this case was partly insanity, and partly something else. Now the defendant was either insane, or not; and it seems to us the moment the mind departs from the first proposition to consider other possible grounds of immunity, confidence in the strength of that proposition is weakened.

But the great negative lesson taught by the case, is to our own profession. It may be briefly stated thus:—that we be not wise above that which we do know. Implied in this lesson, as prerequisites to professional opinions, are cautious and legitimate methods of investigation, perfect familiarity with the subjects we are called to pass upon, and a mental discipline that admits no conclusion, unless founded upon a broad and comprehensive basis. It means that we should be true to science, speaking, when called to speak on scientific matters, with severe exactness to a single view for the attainment of truth, and a jealous regard for the honor of our profession.

The plea of insanity has, indeed, become an ill-favored plea. It is frowned upon by courts and ridiculed by the multitude. Oftentimes has it been, for this very reason, omitted in excuse for the acts of

those really insane, and some less legitimate line of defence assumed. Oftentimes have the mercies of the Court been solely relied upon, rather than by braving a prejudice so common, to run the risk of its being considered as matter for aggravated punishment. Oftentimes has society, in its cooler and more dispassioned moments, been forced to shudder over scenes of what are termed "judicial murders," enacted under the influence of this very prejudice.

Now there is, in fact, nothing in the plea itself to occasion this. No more perfect or satisfactory answer can be made for transgression of laws human or divine, than that the individual so transgressing was insane. That sense of justice which is natural to us as human beings, acknowledges this, and hence we find the principle recognized in the practices and customs of rude and unlettered tribes, and in all the statute books of civilized people. But because of unscrupulous and cunning men wrapping so easily this cloak of misfortune about schemes and acts of villany — because of ignorance on the part of those called to distinguish the true from the false, and because of the unequal advancement of legal and psychological science, the plea of insanity rests, as it were, under a cloud of prejudice and misconception. We have often asked ourselves to whom, mostly, is this condition of things to be attributed—to the counsel who, representing to a client, or his friends, the justice and propriety of this plea, advises its adoption; or to the physician who, after a hurried and incomplete examination, sanctions it by his name and opinion. We are inclined to fasten the responsibility upon the physician. That the peculiar defence, in the present instance, was not entered upon until so endorsed, appears from the admission of the defendant's counsel, and that it is so in most cases, we are also led to believe, from the nature of the questions involved. Did medical men do their duty in this respect, there would be less discredit attached either popularly, or by the courts, to the plea of insanity, less injustice done to the really unfortunate, and fewer "flings" cast at the character of our profession.

That the medical testimony in relation to the insanity of Huntington, provoked and added to the tone of feeling we here deplore, cannot be doubted. We should be glad to feel that the consequences of it were limited to the case involved.

The name and history of Charles B. Huntington are already familiar, we imagine, to all our readers. There is little need, therefore, to speak of them minutely, and the less so, because we do not here intend to play the part of a juryman reviewer of his case. We do

not care, even, for our present purpose, to deny his insanity. He may have been actually insane and irresponsible for his acts, and the verdict of the jury against him, an unjust one. We do not mean to question or consider either. But what we do question, and propose to consider, are the methods of examination, and the reasons upon which the two medical gentlemen called as experts in the case, pronounced upon his insanity. For the sake of science, and, we might say, for the security of personal liberty, to mention no other or higher grounds, it is to be hoped their course will have but few imitators, and their opinions but little weight as precedents.

The history of Huntington, to one uninformed and unsuspecting that any such secret power or morbid influence like insanity, had been writing itself out in his daily life and acts, might read something as follows: His birth place was Geneva, in this State, and if the family record could be trusted, he was born about the year 1821. The influences surrounding him in early years, both family and social, appear ostensibly to have been of a desirable kind. Notwithstanding these, we find his boyhood marked by wayward inclinations, untruthful words, and dishonest acts, in great abundance. To sum up his character at this period, we write him down "a bad boy." What private influences, antagonistic to the good ones above spoken of, may have entered into the production of this result, are not known, or if known, do not appear. This unwritten history would, we doubt not, furnish some explanation of his early proclivity to the wrong.

Leaving school at the age of sixteen, he becomes acquainted with the trade and business of his father—that of a furniture maker and dealer, and, soon after, his father's trusted assistant. A series of years pass by, in which he furnishes no remarkable items of conduct or character. We hear of him next in the city of New York, in the year 1848, engaged in a copartnership business of the same nature as that to which he was educated. After a year or two of struggling effort, it was eminently unsuccessful. We hear of him next as making his way obscurely into Wall street. Then follow six or seven years of the life of a speculator. All the ups and downs, the wild schemings, and eager scramblings after gold, that sometimes mark the career of those peopling that region, were his. Fancy stocks, fictitious banks, and at last the paper manufacturing business, or, in other words, forgery, became the prolific sources of a princely income. A dashing extravagance, expensive tastes, and careless business habits, followed almost necessarily as counterparts. His character at this

period might be again summed up in a word,—he was an exceedingly "fast" man.

In October last, the secret of his Aladdin's lamp was discovered, and Wall street itself startled at the number, extent, and systematic character of his forgeries. Arrested, imprisoned, indicted, we find him in the city prison awaiting trial. He is a quiet, pleasant, gentlemanly man,—chats of the weather, the flavor of his cigars, the spots on his coat, and such like trifles,—apparently not at all concerned about his present position or prospects for the future. At the instance of his counsel, and in order to confirm or remove an idea suddenly conceived as to his insanity, he is visited by Dr. Willard Parker, Professor of Surgery, and Dr. Chandler R. Gilman, Professor of Medical Jurisprudence, Obstetrics, &c., both of the College of Physicians and Surgeons, of New York.

An hour's examination by the first, and a two hours' examination by the second, resulted in conclusions that Huntington was insane.

Two things are particularly remarkable concerning these conclusions—the one is, the rapidity with which they were arrived at: and the other, the poverty of facts on which they were founded.

Now, it is a possible thing, in certain cases, to decide immediately upon a man's insanity. A glance at one laboring under acute mania, answering fully to the graphic description of this disease, given by Pinel, might be sufficient to settle the question at once in the mind. But what we think as passing strange is, that here, in a form of mental disease confessedly obscure, by some even altogether questioned, easy of simulation, difficult of detection, an interview and examination of less than two hours, and that, too, by medical gentlemen not especially devoted to the subject or treatment of insanity, are all that is required to enable them to speak confidently of its existence.

It is not thus we hope they would diagnosticate physical disease. It is not thus, we trust, they would meet a new and alarming epidemic in our midst, of which the books said nothing and experience was at fault. No! but as devout searchers after truth, as we know them to be, how carefully and patiently would they proceed in their investigations! It is the want of this same catholic spirit of inquiry, when they come to investigate mental disease, that we deplore.

But what are the facts and reasons from which Dr. Parker made out the insanity of the accused!

These were either of a physical nature, drawn from manner, speech, habits, bodily organization; or psychical, as exhibited in the

true working and general character of the mind under examination.

In regard to the first, we have it stated that Huntington was "a feeble man, and an excitable man—a man with a very fully developed nervous excitability."

The distinctive marks of this last condition are not given. Whether it be something peculiar to the nerve tissue—whether pathological, even, or in what relations it stands to a condition, exhibiting itself in an "exceedingly quiet, mild, and inoffensive" general deportment, or in a stony apathy when addressed upon the possible penal consequences of his acts (as we are told, by the witness, in almost the next sentence, was evinced by Huntington), are neither stated nor explained. But we have a certain number of symptoms detailed by the accused, such as sleeplessness, pain in the head, blacksmith's sparks issuing from the eyes,* constipation, and hemorrhoids. None of these are authenticated; but admitting them to be true, do they form a basis of physical symptoms broad or suggestive enough for a theory of mental disease? Are they not all consistent with perfect sanity and irregular habits, and is it not in this direction that their natural application should have been made? No previous attacks of diseases such as are known frequently to precede the mental condition attributed to Huntington; no change of bodily temperament or facial expression; no peculiarities of manner as might result from exaltation or depression; no acts discordant with his past or natural character were established, noticed, or, so far as appears, even looked for. "A very fully developed nervous excitability" seems to have been the sole original physical symptom observed, and how that is to be interpreted we have already seen.

But we pass to the second order of facts observed, namely, the psychical, and we find indifference as to his situation, and a want of feeling at the mention of his family, set down as things remarkable and conclusive upon the question of insanity. Now, appeals to the finer feelings of those sunk in vice, are not often met with sympathy, and a feeling of indifference as to their situation is by no means a rarity with hardened criminals.

In fact, the natural origin of insensibility is crime rather than insanity. In moral mania we might find perversions, extreme changes, violent exhibitions of feelings for or against persons or conditions, but rarely the indifference or passivity so relied upon here.

* *Query.* Whether this is a symptom usually noticed by those who forge?

A mind in the final stages of dementia might possibly exhibit these phenomena, but we would most naturally look for them in one thoroughly demoralized by a protracted course of crime. But however this may be, we cannot understand how this cold indifference, or rather want of feeling towards his family, coincides with that deep and strong regard which is indicated in the remark he makes to the witness, that if permitted to go out, home, and wife, and children would be the first objects he would seek : and again, that he would return if such should be the request merely of his wife and children.

This shows that there was still remaining in his mind some susceptibility to family influences ; at least, it shows no morbid change in this respect.

An inattention to that first law of our nature, self-preservation, was also noticed as a remarkable feature of his mind, and leading to the conclusion of its unsoundness. In circumstances of extreme peril to life or limb, such as might surround a starving family, or overhang a doomed city, or bring out

> "The bubbling cry
> Of some strong swimmer in his agony,"

not to think, or feel, or act in obedience to that law, might argue either faculties in abeyance, or unsoundly conditioned. But who would think of strictly applying such a term as "self-preservation" to that provident care which would provision a house against the inconvenience of a tedious Winter, or guard against a commercial crash by deposits in some secure and confidential quarter, or who would argue from the absence of such a feeling in the mind that it was diseased? Such conduct might be careless—might be "shiftless"—but who would say insane! But the evidences of this singular want of a feeling of self-preservation on the part of Huntington, are as deficient as the feeling was assumed to be. Hear them, given by the witness upon the cross-examination.

A. I asked him what he had done with his money—if he had money laid by, and he said, "No." I asked him if he had made any provision for the future, or put by any money, and he said "No." I asked him if he had been in the habit of gambling and he said "No." I asked him if he had been in the habit of squandering his money upon lewd women, and he said "No."

Q. Did you ask him whether anything was laid by?

A. I did. I asked him if he had made any provision for the future, and put by money.

Q. And then he said "No?"

A. And then he said "No."

There is a naive simplicity in such a manner of interrogation that,

in its light, the inference drawn from it, for instance, "want of self-preservation," seems like a concealed joke.

The reasons given for an act, frequently indicate truly its nature. A mother kills her child that it may become, she says, an angel. "I shot at the king," says Hadfield, "to purchase death at a hand other than my own." "I dare not move lest these legs of mine, which are made of glass, be broken." A young man, riding along the highway with a perfect stranger, deliberately shoots him, and to the question why he did this act, replies: "Society has deeply injured me. There were parties in a neighboring city who stole away my soul through magnetism. I had a right to kill whoever I met." "I was commanded by an angel from God to set fire to the church," said Martin, when brought before the jury for attempting to burn the cathedral of York. "It was necessary that the house of the Lord should be purified of its heresies."

In all these replies, the distorted views and perverted workings of an insane mind are shown.

In the reasons, however, given by Huntington to his medical examiner, for his acts and conduct, we see no such evidence. When he tells us that he made, i e., *forged* paper, not from any special object, but because "he liked it," and "liked a good bank account" —"that if, going along the street, he felt this impulse to make paper coming over him, he would step in any store and make it, and would do so if he had a room full of money," and that nothing under Heaven would prevent his doing it unless his right hand were cut off, and that if let go, he should do the same thing again—we see in his answers more of absurdity than insanity.

One really in the condition contended for him, might have denied the facts, prevaricated about them, speciously and ingeniously explained them upon high moral grounds, or in a dozen different ways, not one of which would have been so foolish as that here employed. He might have explained also, by reference to the law of periodicity, or otherwise, why this "desire to make paper" was felt only at intervals of thirty, sixty, ninety days or so, and in such strange correspondence with the maturity of certain other "paper." Such method in a mad desire is, to say the least, unusual.

But suspicions of the sincerity of these statements, any more than doubts as to their value as proofs of insanity seem hardly to have been entertained. Neither the circumstances attending the examination—the private manner requested for its performance—the family brief prepared for the occasion, nor the shadow of an impending trial,

seem to have suggested any serious thought that the line of defence assumed by the accused was not fair, legitimate, and true. Now, the physician who, through attainments or position, is called upon in a criminal case for his opinions, gives them, not in a partisan, but in a public and broadly professional spirit. His duty to society, and the honor of his profession, should lead him to avoid not only the appearance of bias, but the possibility of imposition and, above all, of self-deception. No precautions to this end can be too rigid—no scrutiny too close.

But the question of simulation on the part of Huntington was not passed by altogether unconsidered. "I examined him with a view to it," says Dr. Parker. "I talked with him, and brought up subjects likely to affect his feelings, affections, and emotions, but there was no influence exerted upon him at all. He was quiet, and seemed to think that he had intended no wrong and therefore ought to be free of all punishment.

Q. Is not that precisely the same sort of insanity which a hardened man, after a course of crime for years, might exhibit if he was playing a part before a medical examiner?

A. A hardened villain might possibly do it, but not as *he* did it.

Q. Will you say, in your opinion, that no hardened villain could do it successfully?

A. I have never seen one who could do it successfully.

Q. I ask your opinion upon that?

A. My opinion is that it could not be done with a person accustomed to examine into these things. There would be some emotion —some manifestation exhibited.

Q. It might be very faint, but you think that it would be detected?

A. Yes, I think it would be detected.

Q. Is not simulated insanity sometimes difficult to detect?

A. Yes, but not when you follow it up. They cannot simulate changes that may occur in the countenance, as the expression of the eye, the blushing or pallidness that may overspread the face. They cannot simulate them *all*, for they increase in proportion to the particularity of the examination.

Admitting that it is sometimes difficult to detect, Dr. Parker finds no difficulty in passing upon the simulation of a form of insanity (which would be the one, if any, assumed by Huntington) most easily assumed, and for the exposure of which the keenest and most continued observation is required. His observations to this end were compressed within an hour. The comparison of the phenomena of the same mind, at different intervals of time, with each other—of action with action, manner with manner, and all with the recognized

forms of insanity, whereby simulation could be alone detected, had this extent of play, no more. If this be to "*follow it up*," we do not wonder the simulation was not detected.

To illustrate the difficulty of detecting doubtful insanity, and to show that something more than mere physiognomical observations are required for the determination of questions of this sort, we are tempted here to refer to the case of Reiner Stockhausen, which of late years greatly occupied and still occupies the attention of the professional mind of Germany.

In December, 1850, Stockhausen, whose previous life had been marked by prodigality, idleness, and vice, and whose record exhibited several convictions for similar offences, was arrested upon a charge of theft. His manner, and the nature of his answers upon examination, led to the supposition that he might be simulating insanity. While awaiting trial, Dr. Böcker was called to give an opinion as to the condition of his mind, and after repeated observations pronounced him a simulant. At the assizes in June following, Dr. Hertz was called upon the same point, but gave no opinion for want of sufficient time for observation. The case was then adjourned and a third expert, Dr. Reichart was added to the commission, to report at the next assizes. In September, 1851, these gentlemen reported ; when it was found that the opinion of the first was as originally given, that of the last named directly opposed to it, and that of Hertz still doubtful. The Court now ordered Stockhausen to be placed in an Asylum, in order that a more perfect investigation might be had as to the condition of his mind, and he was accordingly placed at Seigburg, under the care of Dr. Jacobi, who in November, 1852, after nearly a year of careful examination, gave it as his final opinion, that he was simulating insanity. Upon this, he was found guilty and sent to the house of correction for fifteen years.

The three physicians first named, subsequently published a work upon this single case, in which were given the different methods of investigation pursued by each, and the reasons and arguments in support of their respective opinions.

In what strange contrast does the thorough and scientific way in which this question was considered in the case of Stockhausen, stand to the superficial treatment it received in that of Huntington. But different minds arrive at truth differently ; by some it is gained instantaneously, and as it were by violence ; by others only after long and patient effort. Different minds also require a different number of data for the formation of their opinions ; with some these must be many, with others a single fact suffices.

As the testimony of Huntington's father was not in aid, but merely confirmatory of the opinions thus formed by Dr. Parker, it is unnecessary here to consider it minutely. We remark in passing merely, that in estimating the importance of such an element as hereditary tendency in any supposed case of insanity, many things are to be considered. Each remove of the appearance of this, like any other hereditary disease, upon the line of consanguinity diminishes the value to be attached to it. Its form—the time of life when it appears—its exciting cause—together with the physical organization of the individuals in whom it has previously appeared, are all pertinent to the solution of the problem. No general rule will serve this purpose. Each individual case rests upon its own peculiarities and must be judged of by itself. We are not inclined from the vague accounts given of his family illustrations of insanity, to see through them any legitimate, hereditary title in Huntington to this disease. The fact of a paternal aunt and uncle at the advanced ages one of 75 and the other of 80 years, becoming unsound in mind, weighs little in one direction or the other. It may have been with them merely the natural decay of faculties—the dementia of old age. An explanation of the nature of their cases as well as that of the maternal uncle, how caused, or upon what grounds they are made applicable to the case in question, are neither given nor attempted.

Few who have made disease in its appearances, history, causes, transmission, and treatment, an intelligent and philosophical study, would say that because a bright and promising lad becomes through evil associates addicted to masturbation, and falls thence by slow degrees into a hopeless, starless mental darkness ; because an aged grandfather tottering on his staff, becomes a peevish, muttering, incoherent child again ; because another member of the same family on some day of exposure is stricken down by insolation, and rises from his bed of weakness, only to become thereafter a paroxysmal maniac ; that therefore such a family was affected with the taint of insanity and a strong hereditary tendency thereto, established against its remaining members or their descendants. And yet the inference drawn by Dr. W. Parker in this matter, is no more logical or scientific than such a one as we have here supposed would be.

But the opinion formed and expressed by Dr. Parker, of Huntington's mind, was not dependant upon this matter of hereditary tendency, early disease of the scalp, boyhood's history, or upon any or all of the long series of actions, hypothetically enumerated by counsel, to witness, as marking the city life of Huntington in its

short, but brilliant career. "It was entirely dependant," he says, "upon his (Huntington's) statements, and my own examination into his physical condition."

Again upon his cross-examination he reiterates the same assertions, and we copy them here merely for the purpose of showing how charitably elsewhere, their nakedness has been covered.

Q. Upon what he said to you, and from what you judged from his appearance, would you pronounce him (Huntington) of unsound mind, from your examination of him and from his appearance?

A. No; not simply from his appearance.

Q. From your examination of him?

A. From my examination of him I should.

Q. Independent of everything else?

A. Independent of everything else.

Q. You would pronounce him then, of unsound mind?

A. I would pronounce him of unsound mind.

Q. Do you mean by that, that you would pronounce him to be insane.

A. I mean by that, that I should pronounce him to be insane.

Q. Do you mean entirely insane?

A. I do not know that I know what that means.

Q. I mean, not being a monomaniac?

A. I think that his insanity partakes more of monomania, than of any other form.

Q. Do you mean by that *moral insanity*?

A. Yes, I think he was morally insane.

Q. Now upon what subject is he morally insane, in your judgment?

A. He appears to have no conception that he has committed any wrong; he does not appreciate this wrong as a sound moral man or sane man would.

Q. Do you mean that he is insensible to the consequences of crime?

A. I think he is incapable of appreciating the crime of which he now stands charged.

Q. Do you think he is incapable of knowing that forgery is a crime?

A. I do not know that he is incapable. I do not say that.

Q. You say that he is incapable of appreciating the crime with which he is now charged, but that he is not incapable of knowing that forgery is a crime?

A. I think he knows that forgery is a crime, but I think he does not appreciate the bearing that that crime has upon his character.

Q. You mean then, that he does not appreciate the stigma or the disgrace of the crime?

A. I think he does not.

Q. Have you any doubt now that he knew that forgery—such a forgery as this—was a crime?

A. I have not ; I think he knew it was a crime.

Q. Is it a mere insensibility to the consequences of the crime and the disgrace which it inflicts, upon which subject you say that he is insane ?

A. No ; it is not.

Q. What then ?

A. He has a diseased organization, and consequent upon that diseased organization, he has this strong tendency to "make paper"—to raise money—and there is his monomania, and he will do the same thing again. Although he may know it is wrong, he will do it again.

Now the existence of monomania, thereby meaning a morbid perversion of one or more of the faculties of the mind, the others remaining unaffected, has long been a vexed question among psychologists. Some looking at the mind as a unit, deny that if one faculty be out of joint there can be an integral remainder, but that as in law, "falsus in uno, falsus in omnibus," so here, unsound in one respect, unsound in all. Others deny the correctness of observation, in the so-called cases of monomania, and assert that in each there is a fundamental affection of the mind displaying itself at times in general and complete disorder, but ordinarily manifesting itself partially or in a certain direction. A monomania confined strictly and exclusively to the moral or emotional part of our nature, while the intellectual part is unaffected, has never been satisfactorily determined. How can thought or other intellectual processes, which in their intensity, direction, and operations are so much affected by the emotions, escape participating in an unsound and disordered action of the latter ? Hence in any case characterized chiefly by derangement of the moral faculties, we should naturally look to find the intellectual also involved, and hence it is that in nearly all the cases referred to, as illustrating homicidal mania, we find exhibited in the first instance, or eventually, intellectual aberration also. In some it may not be obtrusive, but skilful and scientific observation detects it. But no delusions or hallucinations were noticed as characterizing Huntington's mind. His answers to the questions put to him, though oftentimes as brief as yes, or no, were so far as appeared coherent, pertinent, and expressive. There seemed to be no fascination in the subject of "making paper," that held his mind continually fluttering about it, as a candle holds a moth ; there was no starting off on some wild vagary at its mention ; neither was he found by his examiner intently scribbling upon suspicious foolscap, deep in the mysteries of "collaterals."

He makes a simple quiet assertion, that there is an impulse—a tendency in his mind to "make paper," so strong and persistent, that nothing could prevent him yielding to it. The assertion is believed and monomania established. But how established? Logically, of course. He had a diseased organization, ergo, he had a strong tendency to "make paper," ergo, it was monomania.

But how was the diseased organization established? We have already shown how slight were the reasons for this premise, and how almost wholly they were builded on the statements of Huntington. But how was the existence of this tendency to "make paper" established! Not by any acts, but wholly by the statements and assertions of Huntington, and these listened to for less than an hour. It was then upon statements and assertions of Huntington himself, that the establishment of his monomonia finally rested. We have here arrived at a singular pass. We have not only monomania, which as we have already said, was a mental affection of doubtful existence, but monomania running in an entirely novel direction—a monomania which can only exist among civilized people and in a commercial age—a monomania as yet with no very definite "local habitation," and entirely without a name. We have the certainty of its existence, too, dependent entirely upon the statements of the individual in which it appears, and upon an examination of that individual by a professional expert during the space of an hour. We do not think that ridicule is a proper test for truth, and though observing here and elsewhere, as when speaking of a diseased physical organization that would lead a man to get up fictitious banks and spurious notes, and forged securities, &c., &c., fair opportunities for the use of such a weapon, yet we prefer simply to characterize the professional opinions of Dr. Parker upon this trial, as formed on no sufficient basis of facts, as unscientific, and therefore of little value. In saying this we do not wish to treat them either with injustice or disrespect. We would praise them but for the reasons we have given. As it is we can only say of them, what is often mentioned as a redeeming trait of those in humble circumstances of life, "that though poor they're honest."

In examining the testimony of Dr. Gilman, one is strongly impressed with the indefiniteness of his views relative to insanity. There is evidently a manifest avoidance of its divisions, even where these are essential to the elucidation of the subject, and a disposition to generalize instead of confining himself to the facts of the case under investigation. Thus the whole field of insanity is left open, and any

symptom not properly belonging to one division may be readily referred to another. We are not aware that any writer on this subject has neglected to adopt a classification of forms, each of which determined by a certain group of symptoms, as in mania, melancholia, &c., conveys at once to those conversant with the subject, a good idea of the particular condition. These divisions are natural, and even the type of the morbid condition exists in a physiological state. One variety may merge into another, rendering the diagnosis during the transition extremely difficult ; but this, by no means, lessens the importance of divisions which contribute so much to a comprehensive knowledge of iusanity. Ray remarks : "The deplorable consequences of knowing but one kind of insanity, and of erecting that into a standard whereby every other is to be compared and tested are too common in the records of criminal jurisprudence, and it is time that it were well understood that the philosophy of such a method is no better than would be that of the physician who should recognize no diseases of the stomach for instance, but such as proceed from inflammation, and reject all others as anomalous and unworthy of attention."

When the condition of mind is questioned, a vague idea on the part of the medical expert is insufficient, and the use of the term "general insanity" is considered as indefinite as would be the application of "disease" to a morbid physical state. Medical testimony is of but little value unless some marked analogy be shown between the particular case and a recognized form of insanity. Damerow, Ideler, Jacobi, and many others, adopt the method of exclusion in determining the mental state, viz : by comparing the general mental aspect with the well-known forms of insanity, which latter are successively rejected when a proper correspondence is not found.

Dr. Gilman in characterizing Huntington's condition uses in his testimony the following expressions : "I do not know that I can give it any name other than that it was insanity or unsoundness." "I think this man is generally insane." "I do not believe in a man being partially insane." "I suppose that Huntington has that mixture of moral and intellectual insanity which is very common." He discards the idea of delusions or hallucinations having exerted any influence on the conduct of Huntington, and states that they are "entirely out of the question in this moral insanity." This statement is not in consonance with his emphatic declaration that there was intellectual insanity ; for if the latter existed, how could it be determined but by these "mental aberrations." To show that his views are not generally entertained, the following quotation is given from Ray's

Medical Jurisprudence. "Intellectual mania *is characterized* by certain hallucinations or delusions in which the patient is impressed with the reality of facts or events that have never occurred, and acts more or less in accordance with such belief, or having adopted some notion not altogether unfounded, carries it to an extravagant and absurd extent. It may be *general*, involving all or most of the operations of the understanding; or *partial*, being confined to a particular idea or train of ideas." In fact we are not aware that any difference of opinion exists among medical writers as to these characteristics of intellectual disease. Now, if as stated by Dr. Gilman, there were no delusions or hallucinations, the intellect could not have been involved so deeply as he represents.

Again, if there were no delusions or hallucinations, but merely perversions of the natural feelings, affections, inclinations, temper, habits, &c., how could the existence of insanity have been determined in an examination of less than two hours? He had no previous acquaintance with the examined, no facts to compare with his present condition, no means of determining as to a change having occurred in his moral qualities—all of which are essential to a correct diagnosis. Moreover, a propensity to make false representations being usual in moral insanity, it is surprising that the Doctor should have received so implicitly the statements of one whom he believed affected with this disease.

To prove that this is fairly represented, the following questions and answers are given:

Q. Was there anything else you noticed peculiar about him?
A. Yes; I mentioned that he was utterly deluded in reference to his position. He could not appreciate it.
Q. Why do you think so? Because he said so?
A. I know nothing but what I saw of him.
Q. He did not seem to be aware of the danger in which he stood? You based that idea on what he said?
A. Yes; and on my cross-examination of him.

The Doctor testifies distinctly that the answers of Huntington were never incoherent, which fact determines the mind not to have been enfeebled as in dementia. From the statement that Huntington had an irresistible impulse to commit crime, the inference would be drawn that the insanity should be classed under the head of partial moral mania. Dr. Gilman, however, does not admit a partial form of insanity; nor is there any direct proof in his testimony of such an impulse aside from the assertion.

Let us examine in detail the reasons assigned for the conclusion

that Huntington was insane, for which purpose we state those that are dominant in the direct testimony.

1st. "The point that struck me most strongly in reference to this man was, in the first place, his utter impassivity."

This condition, although real in dementia and apparent in melancholia, rarely exists in moral insanity—the exception being only where depression follows exaltation of intellect. But it is conclusively shown, both from his confidence of escape and his general conduct, that there was no depression of mind. In almost every case of moral insanity excitability and irascibility constitute a prominent feature. The fallacy of this reason is also evident from the cases reported in "A Medico-Legal Examination of the case of Charles B. Huntington, with Remarks on Moral Insanity and of the Legal Test of Insanity. By Chandler R. Gilman, M.D." In this excellent selection of twenty-three cases, a skeptic might be readily excused for not discovering the least resemblance between any one of them and the facts presented in the medical testimony in the case of Huntington.

2d. "He was perfectly confident of his escape from this charge—perfectly sure that he would escape."

In intellectual mania this idea is not uncommon—the individual imagining that he is governed by some "higher law," or possesses some power within himself which prevents others from controlling him. It occasionally exists in moral mania, but has no necessary connection with the disease. To attribute this confidence of escape to his impunity from punishment, seems more reasonable than to any form of insanity.

3d. "It seems impossible to excite this man's natural feelings."

This condition, generally found in moral mania, is by no means confined to it, as the proper sense of relative duty may be perverted without the existence of insanity. It is surprising that Dr. Gilman believed in his ability to decide as to the internal feelings produced on Huntington by reference to his family. A gentleman with a Wall street training, could certainly repress for the moment any visible manifestation of emotion. Besides, there is a discrepancy on this point with the testimony of Dr. Parker, in which it appears that Huntington would return to prison if requested by his wife and children—a fact which clearly shows their influence.

4th. "Then, as to his moral sense, there does not appear to be any of it."

This accords nearly with its actual state in moral insanity; but

unfortunately it cannot be considered a test—the conscience being equally distorted in moral depravity.

We cannot conceive how, that in an examination so short, the secret recesses of the heart could have been so thoroughly explored. The incredulous might believe that "moral sense" had been used like "general insanity," without any definite meaning. In connection with this we would refer to the frequent allusion to Huntington's "diseased brain," or to the "physical change in the brain."

It is an essential element of insanity that the brain should be in a morbid condition; but that this should have been ascertained from the symptoms enumerated in this case, certainly evidences wonderful acumen. The usual symptoms of a diseased brain not having been specified, the only rational supposition is that the fact was determined through the medium of an *oculus medicus* by some intuitive process of mind.

The above are the principle reasons given in the direct testimony for believing Huntington insane; but in the cross-examination, Dr. Gilman describes the particular affection of the intellect.

Q. In what respect is the intellectual insanity exhibited?

A. I think in his conduct generally. In the first place, he was excessively careless in the use of money—he squandered his money. Then he was utterly improvident both as to money and as to providing for his personal safety. Then he was entirely reckless in the way of committing those forgeries. All these things look to intellectual insanity, and, taken together, I think they exist in a degree which is inconsistent with intellectual soundness.

These attributes indicate an affection of the moral rather than of the intellectual faculties of the mind. Intellectual mania may be inferred from conduct, but only where this is the result of delusion. It has been previously stated that no delusion influenced Huntington's course of action, which clearly shows that no actual disease of the intellect existed. General recklessness with regard to money, personal safety, and forgery, is not incompatible with moral turpitude.

It is, in fact, rarely the case that depravity of the human heart extends in but a single direction. One who obtains money in a criminal manner generally squanders it heedlessly, and a long successful career renders him careless, both as to the means employed of obtaining it and to the personal results which may follow. That delicate moral sense which determines right from wrong is blunted; the compunctions of conscience are lessened, and his acts become precisely like those of Huntington, as described by Dr. Gilman. "He talked of the affair as a man would of *usury*, who knew it was wrong, but took it.

Now taking collectively the facts given in the testimony of Drs. Parker and Gilman, and these alone,—since for the purposes of this review, as already stated, we do not care even to deny his insanity, can the conclusion be logically deduced that Huntington was insane.

From these it appears that his reflective faculties were developed; consequently there could have been neither idiocy or imbecility; there was no incoherence to characterize dementia, no delusion or hallucination—the characteristics of general and partial intellectual mania,—and no marked change in his affective faculties, nor even anything which would differ essentially from depravity as in general or partial moral mania.

The little "post partum" tract which follows the report of this trial, and the title of which we have already given, neither by any originality of views, nor force of argument, invites or requires, what indeed our limits would scarcely permit, any extended notice. With a brief examination, therefore, of its character, we put it, as is usually done with such things, out of sight.

Were it not distinctly stated that the object of this production was the dissemination in the popular mind of correct and scientific knowledge upon the subject of moral insanity, one might infer that it was intended for charitable purposes; and that the generosity. with which we here find given the considerations upon which were based the medical opinions of Huntington's insanity, was displayed as a kind of relief to the air of poverty which marked their first expression.

With a view then to the object proposed, and in reply to the question "what is moral insanity?" the author says, "I condense the definition of Prichard: 'a perversion of the feelings, temper, and moral dispositions, or impulses, without any perceptible aberration of the intellect, or any insane hallucinations or delusions.'" Now by this condensation, the very life of the definition has been pressed out of it. The morbid character of the perversion—the element of disease by which irresponsibility is measured,—is omitted. Hence the definition as here stated, would make every departure from truth, every feeling of hate, every exhibition of anger, every deviation from the rule of right, a proof or an instance of moral insanity. The disease would not only be universal, but hereditary, too, throughout the land. But we are assured the object of this tract is to disseminate correct doctrines on this subject, and it is commended by the author "to all who desire accurately to know the ascertained facts on the obscure but most important subject of moral insanity."

We have no especial criticisms to make in regard to the cases we here find adduced in proof of the existence of a substantive disease, defined by Prichard as moral insanity. With some exceptions they seem to be a good selection of cases of partial moral mania, illustrating that division known as homicidal mania. We apprehend, however, that the great difficulty of those reading them will be, not whether they establish the existence of the abstract of such a disease as moral insanity, but to ascertain what relationship they bear to this particular case of Huntington. There is a wide gap left open here, nor does the author of this pamphlet fling over it any bridge of substantial facts.

With many of the strictures contained in this tract, upon making "the knowledge of right and wrong" a legal test of insanity, we express our hearty concurrence. It is a test impracticable in its nature, and oftentimes productive in its operation of extreme injustice. But while recognizing and regretting this deficiency, we would not deal harshly in our censure concerning it. Is it to be greatly wondered at that Law, in her advance in the field of insanity, should move slowly, cautiously, and hesitatingly, when the interests of society, involved by each step, are so momentous, the ground she treads on so uncertain, and the light which reaches her from science is so often, as we have found it in the pages of this trial, flashy and unreliable? L. R. L.

HOSPITAL REPORTS AND CORRESPONDENCE.

Bellevue Hospital.

The improvements which the enlarged and expansive policy of the Board of Governors, urged on by the Medical Board, has effected, in this institution, within a twelvemonth, are such as must afford complete satisfaction to even its most ardent friends. The new wing, in which all the female patients (save those awaiting confinement) are now lodged, numbering 300 beds, is a building which for commodiousness, convenience, and adaptability to its purpose, it would be difficult to find surpassed in hospital architecture. Its wards are spacious, with lofty ceilings, long cheerful windows opening to the floor, letting in a flood of light, and securing ventilation independently of the shafts erected for that purpose, and running up the inside walls to air chambers on the roof. They disclose, too, that

admirable, enlivening river view, which serves as a relief to the tedium of convalescence. These wards are heated by steam radiators, which diffuse a genial warmth through them, and altogether they are so charmingly situated and so pleasant in their internal arrangement, that one is almost tempted to be sick, for the sake of becoming an occupant of one of them.

The interior arrangement of this building is symmetrical. The entrance door is at the middle of the inner side of the parallelogram, and from it the stairway runs directly up to the roof, with a hall through to the other side on each story. On either side of these halls, are two wards containing twenty beds each, the one beyond the other, and between them the baths, waterclosets, &c., and nurses room on opposite sides of the connecting passage. The renovated old wing is finished in the same light and airy style, with the addition of a fourth story, to place it on a level with its new rival, and will now be ready for occupation in the course of a fortnight, when all the male patients will be transferred into it, and a similar work of reform commenced on the other side. This completed, the accommodations of the Hospital will be increased from 700 beds, its present capacity,—which, by the way, is now thoroughly tested,—to 1,200. Nor will its number of beds, probably, rest long at even this high figure : for the present plan looks to the completion of the quadrangle, of which the river is the fourth side, by the erection of a South wing, corresponding to the new wing on the North side, when it will contain, at the lowest estimate, 1,500 beds.

Nor do these improvements contemplate, alone, the increased capacity for, and comfort of patients. The central building, also, is to have an additional story, the whole of which will be devoted to an operating theatre, and surmounted by a fine crystal dome, which, while it will afford ample light for operators, will make the edifice in appearance, as it is in reality, the queen of American hospitals.

This theatre will probably seat comfortably 400 spectators ; and will be a vast improvement on the dark, narrow, dingy, ill-contrived old box, with its long funnel-shaped skylight (so named, doubtless, on the "*lucus a non lucendo*" principle), carefully tinned over on top, in such a manner as to entirely exclude all the vertical rays of light. But dark, and narrow, and awkward as it is, the old theatre has seen good service, in the cause of surgical education, and never better than during the past months of the present lecture season. Beside all the ordinary amputations, including Chopart's and

Symes' operations on the feet, and most of the operations in minor surgery, the external iliac and both carotids have been tied,—the operations for ununited fracture, exsection of the lower jaw, trephining, and strangulated inguinal hernia, with many others not less important, have been performed before overflowing classes. Dr. James R. Wood has, as usual, been particularly active in bringing cases of interest, whether demanding operation or not, before the class. The peculiar feature of his lecturing is its eminently practical tendency, and the brief, sententious way in which his opinions are expressed. His sentences bristle all over with facts, sticking out in every direction, like the quills of a porcupine, and, like them, they are not always erected purely in the defensive.

His operations are of unusual benefit to the student, from the ready facility and care with which he accurately, though concisely, describes each separate step, as he goes along, no stroke of the knife being given which is not accounted for, thus placing the spectator completely in possession of the modus operandi in its details. This art, which was possessed in perfection by that most polished and fascinating lecturer and able surgeon, Mütter, formerly of the Jefferson School of Philadelphia, who was wont to keep more than six hundred students hanging in breathless attention on his lips, is far too much neglected by our clinical operators in this city. No one could possibly have seen, for instance, Dr. Wood's recent operation for hernia, and listened to the careful demonstration of its several stages, without feeling that he had added immensely to his stock of available knowledge on the subject, and would be very much better prepared for an emergency than before, whereas the same operation might have been performed as successfully, in shorter time, and perhaps with more showy handling, and yet nine-tenths of the class have left no wiser than when they entered. One of the principal new features of the Hospital course, this Winter, has been the weekly lectures on surgical anatomy, with demonstrations of all the operations on the cadaver, given by the same gentleman in the new Pathological theatre over the dead house. This neat, unpretending little lecture room will accommodate three hundred persons, and is to be fitted up also as a museum, which will be a valuable addition, as it has long been a desideratum, to the hospital, the opportunities for the collection of morbid specimens being certainly as great as in any similar institution in the country. On the occasion of the inauguration of this building, in October last, when addresses were made by Drs. Francis, Mott, and others of eminence, Dr. Wood announced two

prizes, the one of $50, the other of $25, to be given to the students presenting the two best anatomical preparations, the preparations to be placed in the museum. A proposition from the Medical Board has recently met the approval of the Board of Governors, providing that diplomas be prepared, which shall certify to the fact of regular attendance on a full hospital course, the proceeds to be devoted to the maintainance of the museum. These will shortly be ready, upwards of one hundred names having already been registered as applicants for them. At a recent meeting of the class, complimentary resolutions were unanimously passed, thanking Dr. Wood for his disinterested efforts and untiring energy in behalf of the advancement of the students interests, and of medical education generally.

There is now in the wards the usual large amount of phthisis, which might well be dispensed with in favor of the new Hospital now contemplated for that disease, as it both contaminates the atmosphere and uses rooms which might be better employed. A more interesting class of cases are those of acute rheumatism, which, on the female medical side, have been successfully treated during the past month, on a plan of Dr. Barker's, the visiting physician, of which the following case will afford an example:

Case.—Marian Henrotte, single, aged 25, native of France, seamstress, admitted Jan. 29th, 1857, was taken ill on Monday, the 26th, with rigors, fever, and general pains, and by the next morning all the articulations of the lower extremities were affected with rheumatic inflammation. She had had two previous attacks of the disease, one of which was very tedious. Immediately upon admission, she was put upon the Rochelle Salts and Wine of Colchicum, and followed this treatment for four days, when it was suspended, for the following, recommended by Dr. Barker:

℞ Ext. Colchici Acet.
Pulv. Ipecac.
Pulv. Aloës Socot.
Calomelanos - - aa gr. x.
Div. in pil. No. 10.

S. One every three hours until excessive catharsis or emesis is produced.

This was accomplished, in her case, by eight pills. She was then put upon the "Diuretic Salt," ʒss four times daily. By the end of the second day, the joints were very much relieved, but those of the upper extremities began to be affected, and for two

days more were excessively painful and much inflamed;—rapid amendment then began to take place, so that by the end of another two days, all pain and swelling had disappeared, and she was discharged on the 10th, perfectly cured, without even a slight rigidity of the joints. The cure was effected in six days from the commencement of the treatment. ☞

[From Our Own Correspondent.]

VIENNA, January 20, 1857.

To the Editors of the American Medical Monthly:—

I find myself again among old friends, well known abroad,—authorities on various subjects, whose opinions are so reliable that their endorsement is necessary before our transatlantic friends dare to consider discoveries and truths as such. It is strange that after a period of eight years, I should find all faces unchanged, and as to their expression quite the same.

You may still observe Rokitansky searching among the dead with his wonted countenance,—showing the silent but nevertheless deep thinker,—in order to confirm long established truths, discovered and repeatedly tested, silent as he is, by himself. One has to catch the words which apparently fall by chance from his lips, yet however rare they may be, it well repays the trouble, for every word he utters, though it gives but a hint as to the morbid appearance, is sufficiently instructive to reward one for attentively watching for his remarks.

Intently looking through his eye-glass, both hands kept in his pockets, he now and then raises the one to point to a morbid condition, overlooked or not sufficiently considered, lifting at the same time his head turned towards the student, a smile on his lips serving as words—for to speak is too much trouble to one who, like Rokitansky, is busy thinking ahead. Now and then a remark for further explanation is all that joins the smile, and still it is sufficient to explain what may and might be seen. What else should he do? On the positive field of activity he moves, stories are not needed to fill up the time and amuse the serious student.

The wards I often visited eight years ago, I strolled through once more. It is a division under Prof. Sigmund's direction. This man alters neither in manner nor in speech. Courteous in both, he is

loud in voice to pupil and patient, of course in order to be well understood, for students and doctors, coming from all parts of the world, need a clear and distinct explanation, given as it is in the German language, not well understood by foreigners. You may hear quite as often English or French remarks made for the benefit of those who know neither German nor Latin, which latter, being an Hungarian, he speaks by predilection.

Seated on a low window, Prof. Sigmund is surrounded by native and foreign students and physicians, some of whom are eagerly glancing at the voluptuous forms of the half naked women, introduced by the nurse, one by one, out of the soldier-like formed line, who mentions the name of the patient and the number of her bed, while the assistant surgeon (Secundarius) proclaims the diagnosis and treatment adopted. The patients, most of whom are emaciated and haggard, yet now and then well fed (if long inmates of the hospital), of all ages from 14 to 60 and upwards, approach with spoon in hand, half naked, shirt and jacket being turned down, each one performing three well drilled movements.

1st. Appearing in front with head erect.

2d. Turning around and showing on her neck and back the different erythemata, pustulæ, papulæ, or any form you choose, of the various syphylides.

3d. Turning again in front and opening the mouth for inspection, reaching forward at the same time the spoon for depressing the tongue to the Professor. I must confess the spatula of Dr. Horace Green is better calculated for such a purpose, and I have suggested the idea of giving to the upper end of the spoon of these patients the shape of Green's spatula.

Thus drilled the patients appear daily from 100 to 200 in number. They are supposed to talk German, but a polyglotist has great difficulty in making it out or in finding any similarity to any language, for one talks German which sounds like Bohemian, and another talks Bohemian with such a German accent that it sounds neither German nor Bohemian, so that German and Bohemian students look at each other inquiringly ; Professor, nurse, and student, are left to guesswork, luckily helped along by the loudly speaking syphilitic forms, well marked, and telling.

In front of the window is a stand about five feet high, ascended on its side by a ladder, which serves as a bed to the female patient, who reclines on it so as to be fully exposed while being examined, without giving the trouble of stooping, or the inconvenience of re-

maining in that position, an improvement well worth imitating, for the parts being almost in a direct line with the eye of the spectator, the latter does not become fatigued, for the reason that he can stand erect all the time.

The applications of caustic, or, as frequently used here, of arsenic solutions, are made by the secundarius, and the inunctions with mercurial ointments, according to Sigmund's most recent practice, are made by the nurses, and not left to the patients. The patient kept on the stand is laid comfortably, and exhibits without fatigue as long as needed. The French mode of examining by means of a sheet, is not used in this ward, for the simple reason that the exhibitors would sooner blush when covered by a white cloth than they would without it, coming as they do from various quarters, none so pure as to need a veil.

Sigmund's contributions to syphilidology are well worth being studied, and I shall take another opportunity of speaking of his treatise on Radesyge,* for the purpose of examining which disease he intends to travel into Spain, having already confronted it, and shown its similarity in various distant countries, although appearing under the most different names. Not less interesting is his contribution on "Sleeplessness in Chronic Syphilis," periodically returning at certain hours, which he made to the *Œsterreichische Zeitschrift, für Practische Heilkunde*, published by the Doctors College of the Medical Faculty in Vienna, edited by Dr. J. Knolz, and assisted by Dr. G. Preyss, an eminent man in many respects, who has the care and entire management of it. The journal, although now only three years old, ranks among the first in the country, having original communications of great interest from the highest authorities. Its last volume, consisting of 52 numbers (one appearing every week), contains, among other articles by my friend Dr. C. Brann, Professor of Obstetrics, formerly of Trent, now of Vienna, a valuable article on the "Contraction or Motility of the Uterus, produced by Carbonic Acid Gas." Professor Dietl, of Cracow, added through its columns to the etiology of Diabetes Mellitus. Haller, of Vienna, published in this journal his observations on the *Typhus Laryngo-Ulcer*. Heyfelder, Nusser, and Pabrubein, each of them, as well as Professors Dumreicher and Schuh, have contributed highly scientific articles, which richly deserve translation. Dr. Preyss himself, besides editing

* This is a name given in Norway to a disease analogous to the Yaws. It is by some reckoned as a variety of lepra.—EDS.

the journal, has contributed largely, not only reviewing in a just and scientific way literary works, but also by reporting the transactions of societies. In short, the *Œsterreichische Zeitschrift* is a rising and promising journal, ably conducted by its highly educated coëditor, who spares no trouble nor expense in placing it upon an equal footing with the *Medical Zeitschrift*.

On my proposed return home (to America), I passed last December in Dresden and Leipsic, thence going to Berlin. I spent a pleasant morning at Ruete's clinique for diseases of the eye, in Leipsic. My courteous friend Coccius (who by the way promised me contributions for the AMERICAN MEDICAL MONTHLY) gave me the opportunity of visiting the Institution for the relief of the Blind, erected in a fine neighborhood, enjoying fresh air, and light, and situated almost in the midst of a garden, created many years ago through the influence and care of Professor Ritterich, who, strange to say, though old, pays a just tribute to new inventions, and warmly applauds the results gained by means of the eye speculum. No prejudice whatsoever keeps him from examining, pondering, and judging for himself. The gray Professor, affable and kind in his manner and conversation, is still seated over the folio volumes, although his sight is comparatively unequal to the work his mind intends to carry out. Professor Ritterich has contributed much to German ophthalmic surgery, and was an excellent operator.

The editor of *Schmidt's Jahrbücher* I found in the fourth story. Prof. Richter is a tall, thin, slender man, who talks obligingly. Arrived at his door after a laborious ascension, I said to Coccius who accompanied me, that he might get spiritual contributions if he needed any, at first hand, being so near the sky, but luckily he makes compilations only, and uses the spirit of others.

The last visit, as usual, I paid to the post office, and finding there letters from relatives and friends begging me to return, it needed only my mother's, received at the same time, desiring me in a few words to come back again, to make me so completely *homesick*, that I returned immediately, and now find myself settled in Vienna.

To my numerous personal and professional transatlantic friends, I take this means of saying "Good Bye," and of assuring them of my regards for their kind consideration towards me during my residence in America. As a representative of the American Medical Association at the Congress of Physicians and Naturalists in Vienna, I will send in my report at the proper occasion. As a member of the various medical and literary societies in New York, as well as in

America in general, I beg leave to state that I shall always be happy to act, if needed, in their interest, upon receiving instructions for so doing.

My personal and literary connection with you, the remembrance of which will always be dear to me, shall be unchanged, though at a distance.

I remain near "my sweet home," yet with the highest consideration and regard for you. Yours truly,

ISIDOR GLÜCK, M.D.

EDITORIAL AND MISCELLANEOUS.

— The Annual Meeting of the State Medical Society was held at Albany from the 3d to the 5th of February. In addition to the usual interest of these meetings, the fact of its being the first semi-centennial anniversary of the Society, added to its attractions. The attendance was considerably larger than usual. The President, Dr. Alden March, of Albany, conducted the business with such quiet dignity and wisdom, that the entanglements too common in such assemblages, were entirely avoided. We have attended the meetings of various medical societies, and have rarely, if ever, seen so little time wasted in the discussion of points of order and of constitutional questions,—matters which are especially apt to produce confusion, and fritter away the time due to other subjects.

The scientific papers read were in abundance, and were creditable to the Society. It was notable that although so many were prepared by different members, without appointment or consultation with others, no two were upon the same subject. As notable was the constant courtesy which marked the presentation of the papers, the impartial decisions of the Chair being at once yielded to without a murmur. We have seen it otherwise in similar societies.

Dr. March delivered his inaugural on Tuesday morning. It was a practical and sensible, though brief paper. On Wedesnday evening, Dr. March delivered the usual formal oration which is required of the President. The 50th anniversary led him to recall the events of the half century, not confining himself to the medical events, but to those of a more general character. After the address, the members of the Society adjourned to the Delavan House, where they sat down to a

handsome supper, enlivened with speeches, wit, and humor. The annual election was on Thursday, and the adjournment took place about noon, the meeting having been very satisfactory.

The following are the officers elected for the next year :—

President—Dr. Augustus Willard, of Chenango County.
Vice President—Dr. T. C. Brinsmade, of Rensselaer County.
Secretary—Dr. Sylvester Willard, of Albany County.
Treasurer—Dr. J. V. P. Quackenbush, of Albany County.

— Orthopædic surgery, embracing, as this title does, the care of all deformities, is a branch of the profession which it is particularly desirable to commit to the care of specialists. The treatment is chiefly mechanical, and to be successful requires a constant oversight of the various mechanical contrivances used to effect various purposes. A cardinal principle to be acted on in arranging the apparatus, is to make it such that it shall not interfere with the nutrition and growth of the individual. Surgeons are apt to forget one or another necessity, and are thus often unsuccessful. Thus, to treat Potts disease, one surgeon says if you would avoid deformity, the patient must be kept constantly lying in such a position that the bones will not fall together, and thus make a bad curvature. And the patient's health suffers from the confinement, if, indeed, it be not entirely destroyed. Another, seeing the necessity of fresh air and good diet, with exercise and tonics, advises the use of these, and to let the deformity which ensues care for itself. So it is with lateral curvatures, with hip disease, club foot, and many other such misfortunes. We believe, therefore, that we are doing a kindness to our readers, by calling their attention to a gentleman whose devotion to this speciality is complete,—whose treatment of derangement of the osseous and muscular tissues is thoroughly systematized and equally scientific, and whose contrivances are based on sound principles, and arranged with great mechanical ingenuity. We allude to Dr. H. G. Davis, of this city. His use of elastic bands is far preferable to the stiff, unyielding, and awkward iron apparatus, so far as appearance is concerned, and as a remedial agent, much superior. So fully have we been convinced of this, that we have not hesitated to place patients under his care, and have been quite satisfied with the success of the treatment. The cases are still in progress, but are improving faster than we have ever seen similar ones, under other treatment. One, a case of hip disease, especially pleases us so far, for the apparatus succeeds in reconciling two apparently incompatible things,—the preservation of extension, at the same time that the patient is permitted to walk

about. Another, with Potts disease, is rapidly improving, the apparatus sustaining the body admirably and with perfect ease, and allowing the child to run about Cases of club foot and of lateral curvature, we have seen, are doing well, one of the latter being remedied in a remarkably short time. The mechanical appliances are intended to be arranged so as to assist the muscles which require help, but not entirely to supplant them,—and in this they succeed. The muscles become developed gradually, until they are able to perform their natural functions, as was strikingly shown in a club foot case. Another peculiarity interested us in the treatment of Potts disease. The weight of the column above the disease is thrown upon the transverse processes of the diseased vertebræ, which are usually healthy, even though the body has almost entirely disappeared. On them it is supported, while the diseased surfaces, being kept separate, cease to irritate each other, and the place of the bone, which has been removed, is soon filled by a new deposit, which, becoming firm, supplies the place of the original tissue, and the patient recovers without the hunchback deformity. So in hip disease, it is an item of importance to keep the surfaces apart, as Dr. Davis' apparatus does, and to prevent the irritation produced by constant friction, and at the same time to allow the patient to run about. We know some physicians appear to prefer to keep their patients suffering in their own hands rather than be cured by another; but as none of our readers are of this class, they will be glad to know how to dispose of these troublesome and unsatisfactory cases.

— Our readers will remember the article on the treatment of abortion, by Dr. H. G. Carey, of Ohio, which we published in January. The author describes in that an instrument for separating the placenta, even when the mouth of the uterus is but slightly opened. As the proposition is, in some respects, novel, and two witnesses are better than one, in every matter, we give the following extract from a letter just received. It also shows the benefit one may derive from taking the MONTHLY. But this is the extract:

"Dr. G. and myself were yesterday called to take charge of a lady who had been under homœopathic treatment for ten weeks for flowing, which followed a miscarriage of a three or four months fœtus. Our diagnosis was that the placenta was retained in utero, and must be removed at once. How to do it was the next question, as the *os* was quite naturally contracted. We both thought of the article in the January number of your magazine, and I went to an ingenious mechanic and succeeded in getting an instrument (some-

what rude), with which I performed the operation, much to our own gratification, and, we hope, the safety of the patient. I thought you would be pleased to hear of the case, the point of interest being the ease with which the source of hæmorrhage could be removed with such an instrument as was described, even after so long a time had elapsed since the miscarriage, and when it would seem impossible to remove it with a placental hook, on account of its perfect organization and attachment to the uterus."

— At the last meeting of the Academy of Medicine, the officers for the present year, elected in January, were inaugurated. Dr. Parker, in yielding the Chair, paid a graceful tribute to the distinguished merit of the present President, who, for the second time in the history of this Society, has been called to preside over its deliberations. Dr. Mott, in taking the Chair, congratulated the Academy upon its prosperity, and promised his exertions to continue its usefulness and to increase its prosperity. With a brief allusion to some differences in the past, he expressed his pride in the successful career of the Academy, which he looked upon with peculiar interest, from being one of its original founders. Thus, then, another year was commenced, and as an earnest of its character, Dr. Isaacs read a valuable and highly scientific paper upon the malphigian bodies, this paper being a continuation of a former contribution to the anatomy of the kidneys, which he communicated some time since to the Academy.

—Winter is the time to appeal to the sympathies of the rich in behalf of the suffering and homeless. We have never been more thoroughly convinced of the big heart which beats responsive to all such calls in the midst of this metropolis, than during the present season. We know that the pulse which throbs through this great city is always full, that it is sympathetic to a fault. We know that, like every generous heart, it can laugh and cry, feel disdainful, and be hushed in horror ; and whatever the predominant feeling may be, it enters into it with the fullest enthusiasm. We have seen the feeling of sympathy take expression in sending material relief to the suffering, both at home and abroad ; ships laden with the necessaries of life to the stranger—money, in tens of thousands, to our pestilence-stricken sister cities. New York is charitable ! New York is generous ! and in her generosity and charity she is truly imperial. The shores of her noble bay extend like arms to embrace the returned wanderer, or welcome the coming emigrant. Be he rich or poor, alike welcome. If to add to the wealth and prosperity of the country,

the ways of transport take him up, and carry him cheerfully and quickly to his place of destination. If needy or sick, homeless or friendless, the hand of charity points to those splendid public institutions, at once the glory and pride of New York, where he can find a safe asylum, and a cure.

These institutions are striking in their size and architectural magnificence, and alone constitute a claim to nobleness of purpose. But with all their real and apparent greatness, they hardly equal in extent or usefulness the many private charities, which contribute so much by their active aid to the welfare of our poorer citizens. A history of the private charities of New York would be exceedingly interesting, but we cannot enter upon so extensive a subject in our pages. They are constantly increasing as new requirements spring up, and citizens are readily found for the emergency, to lend aid and influence to the new cause. None, however, have a better claim to the liberality of our hearts than defenceless children, and those unfortunate women for whom the Woman's Hospital was instituted. And these are provided for. For some time there has been an institution for the care of children, known as the New York Nursery, supported by private contributions, and under the patronage and control of a board of Directors, composed entirely of females. It has grown under their superintendence, until its area of usefulness requires larger outlays, and a more expansive organization. During the present Winter a bill has been introduced into our State Legislature, to change its name to that of the "New York Nursery and Child's Hospital," and provides that it shall have the usual powers delegated to such institutions. The other charity, the Woman's Hospital, is well known, and is already organized, but depends as yet upon private charities, its Board of Directors also being from among our noble benevolent women. They want funds, and, full of devices, a ball is improvised which shall, at the same time, give amusement to the donors and replenish the exhausted treasuries. So these two institutions combine; and generous New York, with all its fashion, its round of gaiety, its devotion to commerce, and the pursuit of wealth, stops to dance and be merry for the benefit of these defenceless children, and these poor women. Thus the impulses of New York are turned in a right channel, and from the love of gaiety springs a source of genial charity. New York dances, and a Child's Hospital is supported; New York waltzes, and a Woman's Hospital is aided; New York amuses itself and $9,000 results for benevolent purposes. Again, a wealthy citizen opens the doors of his princely

mansion: the weather is bitter cold, yet the gay and the good come crowding in carriage and on foot, to lounge a few hours through the gilded saloons, to hear the tuneful voices of amateur singers, and to pour their dollars into the lap of charity. From this new device of the managers of the "Woman's Hospital" and the "Home of the Friendless," another sum of $3,000 is raised for the benefit of these two institutions. Within a fortnight's time, $12,000 is raised for three charities, which constitute but a trifling part of the many similar institutions which necessarily arise in our midst. These results, so easily obtained and yet so striking in proportion, make us award to New York its due meed of praise—that mantle of charity which covereth a multitude of sins.

—We are inclined to think that there is, at last, something new under the sun, to wit: a graceful and public recognition of the education, tastes, and cultivation of the medical profession. That we may acknowledge it, and that it may be appreciated elsewhere, we copy from a circular distributed to the physicians of this city, and followed in due time by complimentary tickets. The italics are not ours.

"You are probably aware of the great, and, by Mr. THALBERG, unexpected success, that has attended his professional career, since his arrival in the United States; and of the signal favor, with which he has been received, particularly in New York. Every stranger, who meets with a hospitable reception in a foreign land, should make some suitable acknowledgment for the kindness thus bestowed upon him. Artists generally lend their services for some benevolent purpose. This Mr. Thalberg has partially done, and would continue to do so, did not so many difficulties present themselves, which it would take too long to enumerate. He, therefore, prefers giving Six Gratuitous Concerts to the Children of the Public Schools, one of which has already taken place, and would like to offer some pleasure to all those, who, by education, could appreciate such an entertainment, but would find his Concerts too expensive.

He has selected the Medical Profession in preference to all others. Education eminently fits them for the enjoyment of every intellectual amusement, and it may afford them a relaxation from their arduous duties.

Mr. Thalberg trusts that the invitation thus tendered to you will be received in a kindly spirit, and that he may be happy enough to cause you some slight gratification.

Many who will receive this circular may be in such a position that they could easily afford paying for their tickets. To such he tenders his excuses, *and requests them to present the Complimentary Admission, that will reach them in due time, to any of their colleagues who may have been overlooked, and with whom the expense would be an object.*"

In the name of the profession, we thank Mr. Thalberg for this unusual compliment. Its value is not in the price of the ticket, but in the spirit with which it is done, and in the delicate manner of the doing.

—A letter writer from Paris thus describes a medical notability, as he appeared at a *bal intime*, at the Palace of the Tuileries :—

"Leaning up against the door leading into the Salle de la Paix, you see a tolerably tall, straight man, with long, black hair, no beard, and a lively, animated face ; who is always showing his fine large teeth, and whose breast is covered from side to side with foreign decorations. This is Philip Ricord, the great doctor, and you would suppose from the manner in which he stands there, saluting every one that passes, that the whole assembly are, or have been his patients."

— The need for colleges of Pharmacy is well illustrated by a sad accident in Baltimore a few weeks since. A prescription was sent to a druggist, who put it up, and a dose was given to the patient (a child), and he died almost instantly. The physician being called, took the phial and hurried to the druggist, charging him with having made a mistake. This the druggist denied, and to prove it, foolishly took a dose himself, and in five minutes was dead. The physician himself, who ventured to taste it, narrowly escaped a similar fate. The mistake was in adding an acid to a solution of cyannuret of potassium, which, set free, its prussic acid.

Fumigations with Sulphur.—We know that Hippocrates could not deliver his country from the plague, till he had caused sulphur to be burned in the houses, the streets, and the public places. I am indebted to M. Benoit, engineer of mines, for the following observations : During the Autumn of the year 1854, the cholera raged with great intensity in the provinces of Seville and of Huebra, in Andalusia, without excepting the neighboring region, the mining district of the Rio-Tinto. It was observed that in all the places where they roasted the iron ore which they obtained from these mines, there has never been observed a single case of cholera. By roasting this pyrites, sulphurous acid and a little arsenious acid is set free. The confidence of the inhabitants in the salubrity of these places (thanks to the purification produced by the roasting) was such that many, in order to protect themselves the better from the scourge, roasted small piles of the pyrites in their courts.—*Dr. L. Soulier, in the Paris Medical Gazette.*